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Rehabilitation System Utah ASAP

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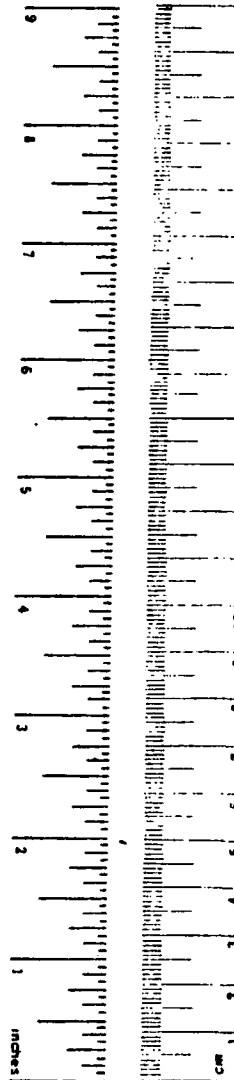
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16. Abstract A sample of 51 non-problem drinkers, 103 problem drinkers referred for treatment, and 28 problem drinkers not referred is analyzed using stepwise discriminant analysis. It is determined that there is a statistically significant difference in the three group profiles based on 15 variables. The most important discriminating variable among the groups is previous DUI history. It is also shown that a fourth distinct group of problem drinkers exists in the sample data. Recidivists are most likely to be problem drinkers. Therefore, the distinction between recidivists and non-recidivists lies in the differences between problem and non-problem drinkers. Furthermore, it seems that little would be lost by restricting the ASAP Drinking Driver Schools (the major referral resource) to non-problem drinkers. It is found that lack of follow-through in treatment programs is a problem; less than half the probationers sampled who were recommended for treatment ever became involved in a treatment program.					
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

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

*1 inch = 2.54 centimeters. For other exact conversions, and more detailed tables, see GPO's Metric Tables, 1980, Units of Weights and Measures, Page 52/53, NIST Catalog No. 1-110-286.



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
km	kilometers	1.1	yards	yd
		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

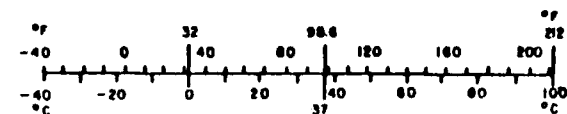


TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1,2
CHARACTERISTICS OF THE REHABILITATION SYSTEM	3
EFFECTIVENESS OF THE REHABILITATION SYSTEM	22
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	41
APPENDIX ONE	45
APPENDIX TWO	48

INTRODUCTION

In order to assess effectiveness of the Drinking Driver Rehabilitation System, this study will examine samples drawn from selected components from Salt Lake County. Adequate numbers were referred to similar programs in this area to provide an adequate basis for analysis. Since the Utah ASAP does not fund treatment, per se, additional data from these programs has been collected. In the general description section, the range of modalities will be reviewed briefly. Assignment criteria and methods will be presented with particular emphasis on consistency among pre-sentence investigators.

General practices involving court incentives will be described and the Ogden City "First Offender Program" will be specifically analyzed. Compliance follow-up methods will be directed to the specific modalities chosen for analysis; i.e., the University of Utah Alcoholism Clinic, Vocational Rehabilitation, and the ASAP Educational School. Complete descriptions of the ASAP School, the University of Utah Clinic and Vocational Rehabilitation will be presented as data is available.

In order to assess effectiveness of Rehabilitation, the study will review arrest recidivism of those referred to selected programs. The attendance and follow-through will be discussed, as well as the profiles of those referred to different modalities. Unfortunately, crash involvement is unavailable since accident record files are not accessible by name. Under this section, the six-month ASAP school session will be compared with the six-week session. Cost efficiency will be presented for the ASAP School; however, since ASAP does not fund the other rehabilitation programs, actual

costs are unavailable, although some estimates will be given.

Purpose:

The study will present a review of the effectiveness of specific parts of the ASAP Rehabilitation System, as it is being continued with state and Utah Highway Safety funding under the coordination of the Utah ASAP continuation staff. It will compare referral criteria with actual referrals. Profiles of individuals in various treatment categories will be compared as well as recidivism profiles.

CHARACTERISTICS OF THE REHABILITATION SYSTEM

General Description

Utah ASAP Rehabilitation System is structured so that schools for drinking drivers are funded and operated within the original ASAP design, while more extensive rehabilitation efforts are conducted by independent agencies within the community.

In both Ogden and Salt Lake, the rehabilitation process begins with the pre-sentence investigator. The court refers a person convicted of DUI to Adult Probation and Parole where an interview and background investigation is conducted. On the basis of the information gathered, a recommendation is made to the court and the judge sentences the person specifying the particular recommendations made by the pre-sentence investigator. The investigator must judge whether or not the person is a problem drinker and whether or not treatment is appropriate. If the judge includes the recommendation in the sentence and puts the individual on probation, then the probation officer has court authority to enforce the terms of the sentence.

Salt Lake, Provo, Logan, and Ogden have ASAP type schools as resources, but rehabilitation facilities vary considerably. Salt Lake has a range of in-patient and out-patient programs for high and low income groups, as well as active AA groups and vocational rehabilitation counselors. Ogden has more limited facilities, especially in terms of out-patient therapy for low income clients and vocational rehabilitation counselors involved actively with alcoholics.

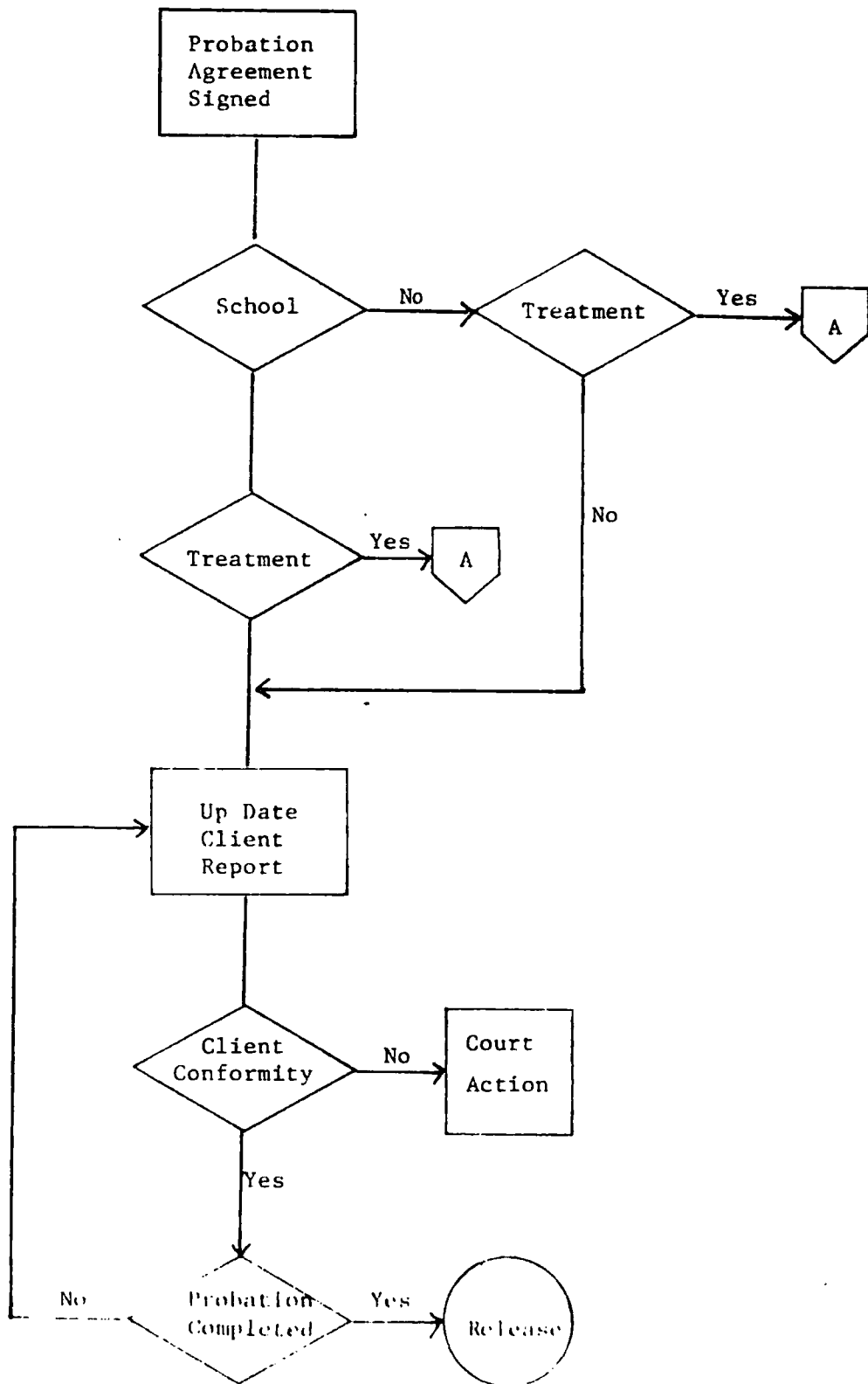
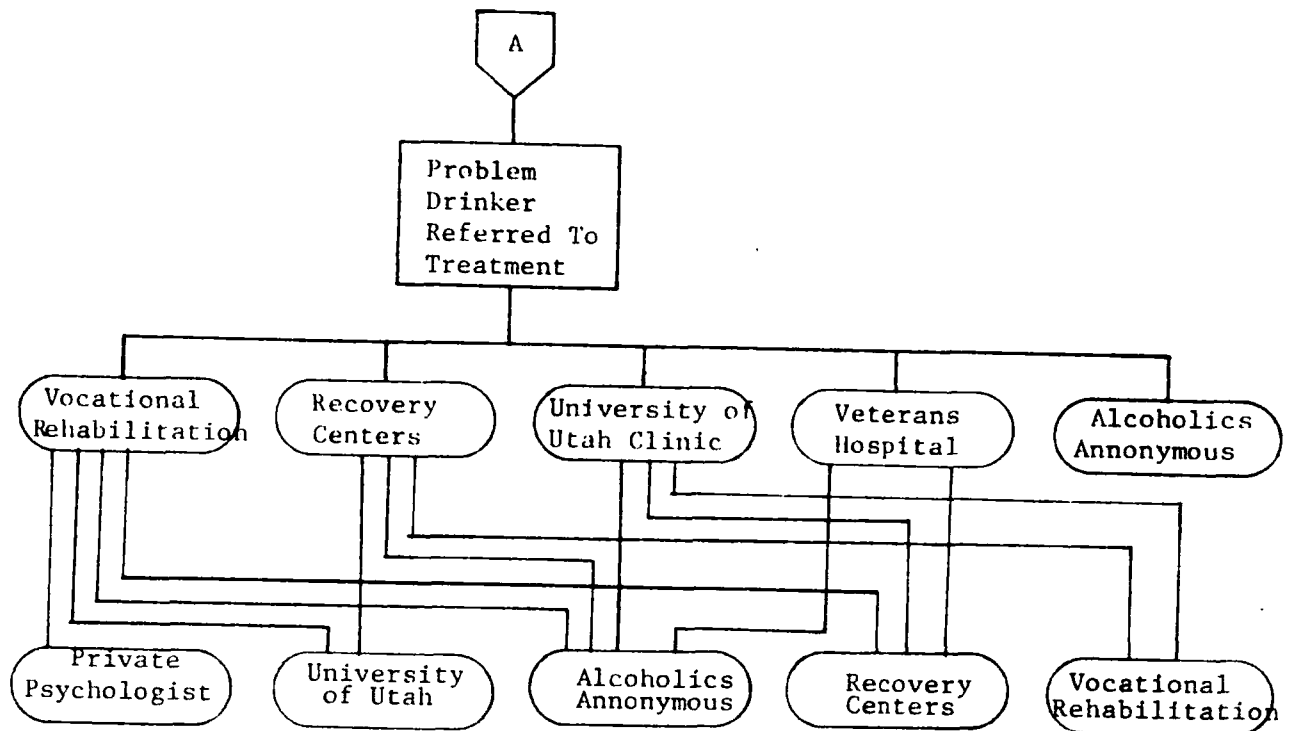


DIAGRAM SHOWING REFERRAL
 OPTIONS AND INTERRELATIONS
 BETWEEN MODALITIES IN SALT LAKE



However, their AA groups are well organized and provide a valuable resource. AA in Salt Lake is an important and integral part of the system, but self-referral is more common than court referral.

In Salt Lake the services are integrated and a person in treatment at the University of Utah Clinic may be involved with Vocational Rehabilitation, AA, and residential treatment centers as well. Entry at any point may activate referral to another part of the system, thus it is difficult to precisely identify the type of treatment as conforming to a specific technique or modality.

During the term of probation, the individual turns in monthly reports, and at the end of the time specified by the courts probation is terminated. However, if a person is actively involved in treatment, probation termination does not affect that status. The flow chart describes the Salt Lake system and a more complete program description follows under the modality section.

Assignment Criteria and Methods

In an attempt to evaluate the importance of various assignment criteria and methods as well as test consistency of application among presentence investigators, structured interviews were conducted with 3 Ogden presentence investigators and 3 Salt Lake presentence investigators. During the study, investigators were asked to describe how they determined "drinking problems" and to rate various criteria as important, relevant, or unimportant in making the assessment. They were then asked what influenced their decision to refer the person to treatment and several factors were rated on their effect on the referral process.

Table I shows the average rating assigned to each factor on a scale from 1 to 3, 1 indicating unimportant and 3 very important. The average ratings are listed.

TABLE I

Average Factor Weight For
Determining Drinking
Problems

Prior Record	2.7
Manner	2.7
Family Problems	2.2
Work Stability	2.2
Mortimer-Filkins Score	1.7
Reported Drinking Pattern	1.7
Community Stability	1.7

The unstructured interview emphasized the importance of BAC (which should have been included in the Factor Weight) and elaborated on the specific behaviors falling under the "Manner" classification. Six out of seven PSI's were especially cognizant of discrepancies in reported behavior and documented behavior, i.e., someone with a 3.2 BAC who reports that he had "just a few drinks" and "rarely drinks at all" presents an obvious discrepancy. Coverup and denial were mentioned and several investigators said that collateral reports were important even though sometimes misleading. In general, someone who was open and candid about drinking and other problems was less likely to be seen as having an alcohol problem than someone who was evasive and quick to deny.

Pre-sentence investigators were much less consistent about referral practices. Table 11 shows the distribution of responses to factors that might influence the decision to refer problem drinkers to treatment.

TABLE II

Factors Influencing Problem Drinker Referrals
Number of Responses

	<u>Affects Decision</u>	<u>May Affect Decision</u>	<u>Does Not Affect Decision</u>
Willingness to accept referral	4	1	2
Hostility to treatment	1	2	4
Prior treatment successful	3	1	3
Prior treatment unsuccess.	3	1	3
Denial of problem	3	2	2

Analysis indicates that conditions under which presentence investigators refer tend to vary. Some think that unless a person is willing to admit that a problem exists and is willing to try to work on it, a referral is meaningless. Others feel that when a referral is indicated, it should be pursued, resistance notwithstanding. Most will try to overcome some resistance but do not have the time or energy to drag someone kicking and screaming to a counselor.

Presentence Investigator Consistency - Evaluation and Referral

In order to assess the consistency with which PSI's identify social and problem drinkers and make consistent recommendations, the seven PSI's were asked to categorize 17 randomly selected presentence reports. The reports were selected from three groups - social, problem referred, and problem not referred. The names, summaries, conclusions and recommendations were stricken so that the judgments would be based on factual information.

Five presentence reports were drawn from a group where the investigator had identified a person as a problem drinker but made no referral;

five reports were from a group identified as problem drinkers but referred to treatment, and seven were from a group of non-problem drinkers.

Analysis of the data in Table III shows high consistency in identifying problem drinkers, but almost no consistency in recommending treatment.

TABLE III

Presentence Investigator Agreement
on Classification and Referral

<u>Category</u>	<u>Number</u>	<u>No. on Which all PSI's</u> <u>Agreed on Category</u>	<u>No. on Which all PSI's</u> <u>Agreed on Treatment</u>
Problem-No Referral	5	4	0
Problem- Referral	5	4	1
No Problem	7	1	1

The data indicates that it is very easy to spot a serious problem drinker from objective criteria, but it is difficult to agree on amenability to treatment without contact. Furthermore, it is difficult to separate social drinkers from problem drinkers on the basis of objective criteria. These results may be partially explained by the interviews dealing with factors used to assess drinking problems and to recommend referral. Table II indicates that "Manner" is important to presentence investigators; thus, without those personal cues and without objective criteria such as prior arrests (social drinkers rarely have records), the investigator is hampered in making an accurate decision.

The lack of agreement on treatment could reflect the ambivalence about making a referral if the person is not receptive. That kind of information is difficult to abstract from a written report and generally there may be a process of negotiation in which the investigator makes a referral.

Judicial Sanctions

A variety of judicial sanctions are available to enforce payment of fines and compliance with terms of probation. As a matter of course, both City Judges and JP's suspend a portion of the jail sentence contingent upon payment of fine.

While the sanction is available to enforce compliance with probation, its use depends on both the probation supervisor and the judge. Some probation officers report using the threat of jail to successfully enforce compliance, while others report that judges are willing to bring a probationer before the bench but are unwilling to impose jail in all but extreme cases. In a sample of 100 persons referred to Vocational Rehabilitation and the University of Utah for treatment, 55 did not report. If the probation officer was aware of non-compliance he may have used the threat of probation revocation but no bench warrants were actually issued. In such cases the probation officer must weigh the importance of a probation failure against the value of enforced treatment. Based on his assessment of the individual's potential for follow-through, he may choose not to revoke probation. Comparable data has not been gathered for Ogden.

In summary, the use of court sanctions to enforce compliance with probation is limited. While it would seem that this option might be used to better advantage, realistically probation officers with caseloads exceeding 160 may have little time to follow through with court procedures.

Ogden "First Offender" Program

The Ogden City Court implemented a program which emphasizes the importance of judicial court sanctions. Under the assumption that most first offenders

tend to learn from their contact with police and courts and the ASAP school, the court concluded that mandatory one-year license revocation was an unreasonable penalty. Moreover, the penalty created unusual hardship on those whose occupations included driving.

The program, implemented in April, 1974, is structured so that the courts take DUI "guilty" pleas under advisement and if presentence reports indicate that the defendant has no prior DUI offenses, that status is continued for one year. If the person successfully completes one year of probation, the plea is reduced to reckless driving and the conviction is sent to the Driver License Division. During the probation period the Driver License Division is given notification of special probation status so that any infractions during that time can be reported to the court.

Using the currently available data for analysis, only those assigned to the first offender program through February, 1975, have been considered. Thus, the records reflect ten months of operation. For purposes of comparison a group of 100 first offenders referred to the Northern region, Adult Probation and Parole from Davis, Weber and Box Elder Counties was selected from PSI reports. The sample received probation supervision and attended ASAP schools, as did those on the First Offender Program. The other environmental variables such as enforcement rate, court, and other socio-economic variables were not controlled and may confound the results. However, the 1975 Analytic Study Number Five, P. 22 indicates that in 1974 the six-month recidivism rate in Davis County is lower than in Weber County (Weber County-.04; Davis County-.02). Thus the experimental variable would tend to show less effect based on recidivism.

Table IV compares first offenders with the control sample.

	<u>Ogden First Offenders</u>	<u>Sample Control Group</u>
Number Referred	124	100
Number with Prior DUI's	14	0
Total Recidivism	6	8
Recidivism for "True" First Offenders	2	8

The analysis indicates that a program encouraging compliance with probation and behavior change through use of positive sanctions such as license retention is substantially more effective than more punitive sanctions for those with no prior DUI involvement. Only 2% of the "true" first offenders had been re-arrested for DUI through May of 1975, while 8% of the control group had been re-arrested during the same period.

However, 4 of the 14, or 29% with prior DUI convictions, were re-arrested. The reasons for persons with prior arrests being treated as first offenders is unclear. There may have been special circumstances that influenced the courts, or the presentence investigators may not have discovered the prior arrest history. The latter is unlikely since no misclassifications occurred in the control sample and those PSI's were conducted by the same agencies. A similar study was conducted by the Ogden City Court coordinator. This group, in the Table below, showed a difference of 3.2 in the recidivism rate for those going through the program and those not. Although the total rates of recidivism are different, the difference between the rates are consistent with the study prepared by ASAP in June 1975.

	<u>First Offender Program</u>	<u>First Offenders Not on Program</u>
Placed on Program 8/74 to 3/31/75	123	115
Repeats	12	15
Percentage	9.8%	13.0%

On the basis of available data, it appears that true first offenders respond well to the program while there is considerable risk of failure with repeat offenders. The court would be well-advised to limit the program to true first offenders and thus avoid damaging the reputation of the entire project, which on the whole, seems to be worthwhile.

Compliance Follow-up

Procedures to monitor compliance vary considerable with particular probation officers and treatment facilities involved. Generally, probationers file monthly reports and the probation officer can gauge stability and work performance. Outside the monthly report, compliance procedures vary between inhouse referrals, i.e., school; and outside referrals, i.e., treatment.

Since additional information has been gathered on referrals to the University of Utah Clinic and Vocational Rehabilitation, those resources will serve as a model. Referrals are made either directly to the University of Utah Clinic for evaluation or treatment or to Vocational Rehabilitation for qualification, evaluation, and referral. The probation officer may actually make an appointment or simply give the probationer instructions to report to the specified center. Vocational Rehabilitation has a Correctional Referral Specialist and if the individual is referred to him, caseload follow-up is excellent. The Specialist reports back any non-compliance and the probation officer reacts accordingly.

of Utah Clinic are less coordinated. Although clinic personnel feel a responsibility to report non-compliance to the probation officer, they may not be aware of the fact that the person is a court referral or they may not be aware that the person has failed to follow through. The best potential follow-through occurs when the probation officer makes an appointment directly with Vocational Rehabilitation; the poorest occurs when the probation officer relies on self-referral to either the University of Utah Clinic or Vocational Rehabilitation. Once a person is on the Vocational Rehabilitation caseload, the Correctional Specialist provides adequate feedback. Nineteen out of 27 direct referrals who reported to the University of Utah Clinic ended up on the Vocational Rehabilitation caseload as well.

Sample performance indicating proportion of referrals reporting to the University Clinic and Vocational Rehabilitation are provided in Table V.

TABLE V
Number Referred Who Follow Through With
Requirement Reported as Required
Sample = 108

	<u>Number Referred Directly</u>	<u>Number Who Kept At Least 1 Appt.</u>	<u>Number Who Did Not Make Appt.</u>
U. of U. Clinic	44	27	17
Vocational Rehabilitation	64	27	37

The higher proportion reporting to the University of Utah may reflect a selective bias on the part of the PSI to refer more reliable persons to the clinic, or the perception on the part of the person that he is going to receive help at the clinic. Adequate data is not available to test these presumptions at present.

The lack of follow-through is substantial; less than half of the probationers whose presentence investigations recommend treatment or evaluation actually ever become involved with a program. However, both the high caseloads and ambivalence about referring unless a person is willing to accept treatment are blocks to improving the situation. However, such a high proportion of dropouts is hardly conducive to an image of tight control and may work to erode the perception that one must comply with the terms of probation.

Follow-up procedures for school referrals is significantly more efficient. The instructors turn in attendance lists to the secretary in charge of scheduling classes. She, in turn, reports any non-attendance to the probation officer who writes a letter indicating that the person must attend the next session and make up the one he missed. Enforcement of compliance becomes the responsibility of the probation officer and what he chooses to do can reflect special circumstances.

Follow-through to treatment other than Vocational Rehabilitation or the University of Utah may or may not be more efficient. However, the potential for poor follow-through is always present when the responsibility to monitor that activity is not clearly defined.

ASAP Interaction

ASAP's primary contact with non-ASAP treatment resources is through Adult Probation and Parole agents. All agents are knowledgeable about treatment resources and there is considerable mutual respect.

Several agents have either worked for alcoholism programs or have been trained by professionals in the field. In Addition, one ASAP staff member has been involved with the Alcoholism Coordinating Services Council for three years and has been the Chairperson of that group. Such contact has enabled ASAP to understand problems of the treatment system and has allowed a means for communicating ASAP's goals and concerns. As a result of such involvement ASAP has maintained the reputation as a program concerned with all facets of the drinking-driving problem.

The probation officers form ASAP's primary link with the courts as well. The courts have responded favorably to the services provided by Adult Probation and Parole and that agency reports that their recommendations are accepted 90% of the time. In Salt Lake City all City Judges except one refer regularly and in Salt Lake County, 9 City Judges and Justices of the Peace use presentence investigations. In Ogden, 9 Justices of the Peace began referring to the Northern District during 1974. The ability to keep the Judges referring and to increase the number of Judges using the services speaks well for the quality of work.

During 1974, ASAP made efforts to contact the Judges individually to develop closer relations. A very successful Judicial Conference, which included 10 City Judges, culminated the effort in November. The increase in JP referrals in Davis and Morgan Counties can largely be attributed to Judge Mark Johnson's efforts to organize that group. During 1976 ASAP and Highway Safety helped conduct a successful Alcohol Safety Workshop with 16 Adult Probation and Parole personnel from

throughout the state, with representatives from the State Legislature, Murray City Court, S.L.C. Public Defenders Office and Prosecutors Office to discuss the refinement of the system for processing drinking drivers.

Selection of Modalities

Almost all court referrals attend ASAP schools. Exceptions include those who may be illiterate, may not speak English, or who may have completed the sequence during a prior probation period.

Problem drinkers are referred to treatment programs on the basis of several criteria. Proximity to treatment centers and the ability to attend sessions are considered as well as financial status. In Salt Lake, clinical programs provide services with fees based on the ability to pay, while in Ogden, AA is the primary referral resource for those who cannot afford clinical fees. Ethnic background, willingness to accept treatment, and degree of alcohol involvement also determine the resource used. It makes little sense to refer someone whose family situation is relatively stable to an alcohol recovery center for live-in care, so cases are examined on an individual basis.

Individual Modalities

Table VI shows referrals by region and resource. Unfortunately, Salt Lake data is incomplete since the original ASAP funding terminated June 30, 1974 and there was confusion about the information to be retained. Thus, the Salt Lake data reflects emphasis but actual numbers may be inaccurate.

TABLE VI
Persons Referred to Treatment
Ogden-1974

Alcoholics Anonymous	212
Weber & Davis Co. Mental Health	72
PAAG (Problem Anon. Action Group)	18
St. Benedict's Hospital	80
Total	<u>423</u>

TABLE VII

Persons Referred to Treatment
Salt Lake City - 1974
(Estimate)

University of Utah/Voc. Rehab.	212
VA Hospital	8
Mental Health Centers	16
AA	16
Salvation Army	<u>8</u>
Total	48

ASAP School Completions

	<u>Central</u>	<u>Northern</u>
Problem	263	190
Non-Problem	<u>367</u>	<u>322</u>
Total	632	512

Since detailed analyses will be conducted on groups referred to ASAP schools and the University of Utah Clinic/Vocational Rehabilitation, descriptions of individual modalities will be limited to those resources.

University of Utah Clinic

The primary goal of the University Clinic is to offer professional services to the alcoholic and his family. The clinic conducts several other activities in meeting related objectives. The staff provides inservice training for professional counselors, social workers, nurses, and other medical personnel. The clinic takes an active part in community education and encourages research by its own staff members and graduate interns. A lecture series educates alcoholics, their families, and interested persons on various aspects of alcoholism and other drug abuse. Multi-disciplinary evaluations are an important part of the treatment plan. Psychological, medical, vocational, and

social characteristics are viewed with respect to a person's particular problems and needs. Finally, the clinic provides group, individual and family and marriage counseling as appropriate. Referrals to inpatient programs and vocational counseling are recommended when indicated.

When a person makes an appointment with the clinic his first contact is the intake interview. The interviewer recommends that the person attend the lecture series and makes appointments for evaluation if the client is willing to make a commitment for further services. After the evaluation and staff recommendations are completed, the client and spouse meet with a counselor and the recommendations for treatment are discussed and a long-term treatment plan is negotiated. The therapy process is generally long-term, extending from six months to three years. The clinic has a caseload of about 300 persons and, as stated, the therapists are professional psychologists or social workers or graduate social workers and psychology students under close supervision.

Demographic data for those referred to Vocational Rehabilitation will be included in the Analysis Section.

Division of Vocational Rehabilitation

The primary goal of the Division of Vocational Rehabilitation is to assist persons in overcoming disabilities in order to become employed or to retain their employment. Since alcohol is a disabling condition, many persons arrested for DUI qualify for services under that category. A potential client should have a disabling condition, have a reasonable expectation for employment, and meet the financial criteria. Everyone qualifies for some services based on ability to

pay.

The client meets with the Vocational Counselor, who makes a basic assessment of the services needed. The counselor orders the proper qualifying examinations and on the basis of results refers the client to appropriate programs. As a general rule, Vocational Rehabilitation refers about 60% of its alcohol cases to a private psychologist and 40% to the University of Utah Clinic. The private program is short - six weeks - and structured. The six group sessions are designed to facilitate communications and interaction while not focusing directly on alcoholism. The younger more "intact" clients are referred to the program, since it does not require abstinence and is more likely to make an impact on someone whose life style includes drinking.

A vocational rehabilitation counselor has a caseload of about 300. His involvement with the person depends on the variety of services provided and the client may be on the baseload for six months to three years. The counselors are generally college graduates who majored in social sciences and are interested in working with people. Demographic data for those referred to Vocational Rehabilitation will be included in the Analysis Section.

ASAP School

The ASAP School is primarily an educational series designed to give accurate information on drinking, driving, and alcohol abuse, and to encourage those who may drink and drive to take full responsibility for making decisions to avoid driving after drinking too much. Almost all persons referred to Adult Probation and Parole are required to attend the sequence. Exceptions include those who are illiterate, or unable to speak English.

An outline of the six lecture series follows. Each lecture lasts from 1-1/2 - 2 hours. In Salt Lake County, the sessions are held weekly, while in Ogden they are held monthly:

1st Session - "Why Me?" Review of ASAP program; also to identify participants' drinking pattern.

2nd Session - "Legal Aspects". Participants will know the laws of the State of Utah as they relate to alcohol and its relationship to driving.

3rd Session - "Physiological and Social Aspects of Alcohol". Participants will be able to identify the general effect of alcohol on the body.

4th Session - "The Inward Look". Participants will recognize principles of the decision making process; also, how to drink successfully.

5th Session - "Drinking Behavior". Participants will recognize five techniques of defensive driving and also, impairment of driving resulting from drinking.

6th Session - "Personal Involvement and Commitment". Reinforcement of total program concepts.

The instructors are all Adult Probation & Parole agents and generally have college degrees in the social sciences, particularly sociology. It should be noted that the State of Utah has found both the original ASAP schools and the two Utah Highway Safety ASAP schools worth continuing with state funds.

The analysis section will look at the demographic patterns of those attending the schools and will make some comments on six-months vs. six-weeks sessions.

EFFECTIVENESS OF REHABILITATION SYSTEM

Within this section several aspects of the Rehabilitation System will be discussed in an attempt to assess overall effectiveness. Crash involvement, while the ultimate performance measure, is unavailable since accident files are not accessible by name. Recidivism will be discussed in reference to the sample groups. The primary effort will review the difference between identified problem drinkers, social drinkers, and problem drinkers not referred.

The ASAP School will be discussed in terms of perceived effectiveness, convenience, and efficiency as well as knowledge gain.

ASAP School

During January and February, 1975, an independent educational consulting group assessed the effectiveness of the ASAP School and made several observations and recommendations. In general, the instructors were well-informed, well-prepared, interested and effective as information givers. The visual materials were too detailed and tried to convey too much information rather than catch attention. The consultants were critical of combining problem and social drinkers in the same classes and felt that the groups were not conducive to interaction. In addition, the lesson sequence tended to deal with hostility during the second session, thus lessening the effectiveness of the first meeting. Finally, they mentioned that the materials needed updating. Generally, the consultants favored a model encouraging more interaction and personalization of the material presented.

As a result of this and other ASAP statistical findings, the remaining problem areas of the ASAP schools are being focused on by efforts which are outlined in the catalytic effects section.

The six-week session was strongly favored over the six-month sequence. It was the opinion of the consultants that the model had a negative effect on the learning process, student-student, and student-instructor interaction, and the potential for personalizing the experiences.

External measures also favor the six-week sequence. An examination of test performance indicates that while knowledge base is equivalent for the Northern Region (6-months) and Central (6-weeks), the increase in knowledge is more apparent in the Central Region.

TABLE VIII

<u>Average No. Missed</u>	<u>Central (6-Week)</u>	<u>Northern (6-Month)</u>
Pre	20.5	20.7
Post	11.75	14.6
Improvement	8.25	6.1

The persons attending the 6-week session showed an average improvement of 8.25 points, while those in the 6-month series improved an average of 6.1 points. The difference may not be significant, but it may indicate the direction of a real difference.

The six-week session has two other advantages. It allows the assignment of three-month probation periods and thus potentially allows reduction in the caseload. Furthermore, it may be easier to keep people involved on a weekly basis. In 1974, Ogden reported 20-27 violations per quarter. When they changed to a 6-week sequence in January, 1975, their violations dropped to 10.

CATALYTIC EFFECT

The catalytic effects for the ASAP include the take-over of a number of ASAP countermeasure activities by other agencies. These include state funded take-over of the Adult Probation and Parole functions of Presentence Investigation and the Drinking Driver School so that these are continuing in the agency where they were established. Enforcement efforts under state or local funding will continue in the Highway Patrol, Ogden City Police Department, Salt Lake City Police Department, and Salt Lake County Sherriff's Office. Moreover, the efficiency of the ASAP patrols in detection of lower range BACs has spilled over to the non-ASAP patrols.

Hearing Officers and clerical personnel in the Driver License Division which were funded by ASAP will continue to work in the Driver License Division, and will continue to have a priority on DUI and Implied Consent matters. Prosecutors who were full-time on ASAP are to be absorbed into their respective County Attorney agencies, and the prosecution on DUI's will tend to be spread among the staffs of these agencies, hopefully with a high priority on the DUI prosecution.

Increased numbers of persons referred for treatment has created changes in the rehabilitation system and has encouraged the development of additional resources. A group of private psychologists developed a short structured program for alcohol abusers and their spouses. The series focuses on problem drinkers who are not seriously dysfunctional. An NIAAA Grant for Drinking Drivers was implemented in February. Services are being provided for the full range of drinking problems. This program has an important evaluation component which should expand the information gathered through ASAP.

The court Referral Specialist position in the Division of Vocational

Rehabilitation was established to deal primarily with ASAP clients. The assumption was that one person could coordinate the referrals and would be in a better position to report non-compliance with is a critical component of court referrals. Two additional ASAP type DUI schools were established in Logan and Provo by the Utah Highway Safety and will continue with state funds beginning October, 1976. Through presentence investigation, ASAP introduced a methodological process of identifying drinking drivers by their individual life styles. As a result of the ASAP process and its resulting analytic studies, a second generation of drinking driving rehabilitation schools has evolved in Utah.

1. Juvenile Court Alcohol School

This program has been established with a high level evaluation design. Young drinking drivers are the most amenable to change with the appropriate treatment, and as this program is evaluated, it will adapt to the feedback on the effectiveness of different treatment techniques. It has been designed to specialize in the intervention of the young drinking drivers potentially destructive life style. Five sessions have been established in which both the young probationer and his parents are required to attend. In addition to the educational presentations, work sessions made up of non-related parent/youth groups are conducted for increased participation interaction, which less emphasis on academic course content. Followup procedures for course completion are built into the administration of the program. The juvenile Court Drinking Driver Program will be continued under increased funding by the Division of Alcoholism and Drugs and Highway Safety and perhaps some tuition-type funding will allow for the expansion of this program to other major population areas within the State of Utah.

2. Drinking-Driver Multiple Offender

Another hybrid program resulting from ASAP's contributions is now being formulated. This programs target is the problem drinking driver who has been shown to have the least response to ASAP treatment.

To present, there has been little agreement on referral practices as to which modality to suggest for problem drinking drivers. It is felt that these differences probably reflect personal attitudes of the effectiveness of the present treatment modalities. Pre-sentence investigators recognize that the ASAP schools are effective for social drinkers, and the same program will offer them a more directed involvement for problem drinking drivers. Reported drinking pattern has been shown to be a useful indicator for separating problem and social drinkers and will be used in the referral process of this program.

Both of the above programs will be guided by the Utah Highway Safety Program Office in helping to standardize the drunk driving referral process by offering more specialized treatment modalities, and both will be used to lower the alcohol related crash potential of these two groups.

Public Information and Education efforts concerning the drinking driver will also be assumed by the Highway Safety Office.

Rehabilitation Group Analysis

If one grants the premise that sub-populations of drinking-drivers can be appropriately referred to specific treatment programs, then techniques which clarify the criteria for sub-group assignment should be helpful in making accurate referrals. Furthermore, the relative appropriateness of the referral or treatment program can be reviewed with reference to recidivism.

Specifically, one would expect that social drinkers would need less extensive intervention and would tend not to be repeaters, while problem drinkers would require more intensive involvement and would tend to be re-arrested more often because of the long-term progressive nature of alcoholism.

In order to gain more information about persons classified as problem and social drinkers and to evaluate the effectiveness of the largest treatment resource in Salt Lake County, 51 Pre-Sentence Reports on social drinkers and 103 PSI's on problem drinkers referred to the University of Utah Clinic or Vocational Rehabilitation were randomly selected from 1975 files. As a control group, it was planned to use persons classified as problem drinkers either by DOT definition or by the investigator's conclusions, but not referred for further treatment. However, visual inspection of the data indicated that the latter group, consisting of 28 persons, had some special characteristics and could not be considered a control group. A stepwise discriminant analysis of the three groups - social, problem, problem-not-referred - confirmed that these were actually separate groups. The following discussion explains the thirteen

significant variables found to distinguish among groups in order of their appearance.

1. Number of Prior DUI's.

This variable alone accounts for 15% of the variation between the groups. Social drinkers averaged .06 prior DUI's, while problem drinkers averaged 1.1 prior convictions; and problem not referred averaged .28. This latter proportion differs from 1974 data collected when the problem not referred averaged 1.6 prior DUI convictions.

2. Prior DUI Offenses Unknown.

Only 4% of those classified as social drinkers have PSI's with alcohol offense unknown; 14% of the problem drinkers are missing that classification; while 36% of the problem not referred do not have that information. The differences must reflect information gathering techniques. It must be more difficult from other data collected to determine if an individual is a social drinker; therefore prior DUI history is important to the investigator. However, if the individual can be easily diagnosed as a problem drinker, then the investigator does not bother to obtain the previous DUI history. This variable accounts for an additional 8% of the variation among the groups.

3. Length on Job.

This variable accounts for an additional 7% of the variation among the groups, given the previous two variables. For non-problem drinkers, the average time at the present job was 2.4 years; for problem drinkers, the average was 1.7 years; and for problem drinkers not referred, the average was 1.7 years. This

variable was not used to distinguish among the groups in the 1974 sample selected.

4. Probation Recommended.

This variable accounts for an additional 6% of the variation among the groups. Probation was recommended for 86% of the social drinkers, 93% of the problem drinkers, and 71% of the problem not referred group. This variable is not a diagnostic variable; rather it reflects the likelihood that the investigator will recommend a treatment, such as, jail as opposed to education, etc. This variable was not found to significantly distinguish between the groups in the 1974 sample.

5. Retired, Housewife, or Disabled.

This variable accounts for an additional 4% of the variation among the groups. Of the non-problem drinkers diagnosed, 12% were in retired, housewife, or disabled category; 3% of the problem drinkers were in this category; and 11% of the problem not referred were in this category. These percentages indicate that investigators are less likely to recommend extensive treatment for the retired, housewives, or disabled.

6. Religious Preference L.D.S.

About 37% of the diagnosed social drinkers gave religious preference as L.D.S; 39% of the problem drinkers had this religious preference; and 64% of the problem not referred group gave this religious preference. This differs from the 1974 sample when a majority of the problem not referred groups were non-L.D.S. It is possible that investigators may prefer to not recommend an

individual of the L.D.S. religion for treatment at the University of Utah, etc., under the assumption that he can obtain help from services available through the L.D.S. Church. The addition of this variable accounted for an additional 3% of the variation among the group profiles.

7. Mortimer-Filkins Score.

The addition of this variable to the group profiles accounts for an additional 2% of the variation among the profiles, given the previous variables. The average score for non-problem drinkers diagnosed was 11.2; for problem drinkers, the average was 18.0; and the average for problem not referred drinkers was 17.5. It should be noted that this information was not collected in about 50% of the cases, and the rate for the problem not referred group was 80%. Therefore, it is likely that other variables were used to determine classification into the latter group by the investigators.

8. Prior Criminal Arrests.

The addition of this variable to the group profiles accounts for an additional 1.7% of the variation among the profiles. The non-problem drinkers averaged .13 previous criminal arrests; the problem drinkers averaged 1.88 criminal arrests; and the problem not referred group averaged .50 previous criminal arrests. This variable was used in the 1974 profiles. However, the problem not referred group in the 1974 sample averaged almost 3 previous criminal arrests, while the problem group averaged about 1.3 previous criminal arrests. Therefore, it is reasonable to conclude that the investigators are more likely to refer individuals for treatment now than

in 1974, or that these individuals are not as likely to be included as candidates for a DUI presentence investigation as in 1974.

9. Other Race.

This variable denotes individuals with racial backgrounds other than Caucasian, Negro, Mexican, Indian, or Oriental. The addition of this variable to the group profiles accounts for an additional 1.5% of the variation among the profiles. About 2% of the social drinkers diagnosed were of "other" racial backgrounds; about 4% of the problem group were of "other" racial backgrounds; and more than 14% of the problem not referred group were of "other" racial backgrounds.

10. Drinking Pattern Unknown.

The addition of this variable seems to help to distinguish social drinkers; 60% of the social drinkers had patterns reported, while 50% in each of the other two groups showed reported drinking patterns. Perhaps the investigators feel that this information is not of as much value for individuals who may have a problem (it is self-reported). Further, such information would be of little use if an individual had several prior DUI convictions, high Mortimer-Filkins test score, etc., since such an individual would have a fairly obvious drinking problem. The inclusion of this variable into the group profiles accounted for an additional 1.5% of the variation among the groups. This variable was included in the 1974 profiles, but with opposite use. In the earlier profiles, it was found that investigators were less likely to collect this information for social drinkers than for problem drinkers.

11. Drinking Pattern.

When the information concerning a person's drinking habits is collected, it is an important factor in group assignment. Social drinkers report an average of drinking at least monthly, but not as often as once every week. Problem drinkers and problem not referred drinkers drank an average of more often than once a week, but not as often as daily. These self reports seem low, as the reporters tend to bias their own drinking pattern. This variable was included in the 1974 profiles with similar characteristics. The inclusion of this variable into the group profiles resulted in the explanation of an additional 7% of the variation among the profiles.

12. BAC at Arrest.

The addition of this variable to the profiles provides a 1% increase in the explanation of variation among the groups. Social drinkers and problem drinkers not refined average .17% and .19% BAC at time of arrest, respectively. Problem drinkers average .24% BAC at time of arrest. This variable was included in the 1974 profiles, but the problem not referred group had the highest average BAC's in those profiles. This information was available to the investigators in about 70% of the 1975 sample cases.

13. Part-Time Employment.

This variable explains an additional 1% of the variation among the group profiles, given the previous twelve variables. About 6% of the social drinker group were employed part time. Less than 1% of the diagnosed problem drinkers were employed part time. About

7% of the problem not referred group were employed part time. It should be noted that more than 35% of both problem drinker categories were unemployed, while only 7% of the social drinkers were unemployed. Therefore, the inclusion of this variable may be a reflection of overall employment status. Employment status variables were not incorporated into the 1974 sample profiles.

Profile Comparisons - Rehabilitation Groups

The following table shows a summary of the results of the preceding discriminant analysis. The profile elements are presented in the order of their significance as measured by the final F-values in the analysis, not by their order of their additions to the profiles. At the final step in the analysis, 62% of the variation among the groups can be accounted for by these variables.

TABLE
Profile Comparisons

	<u>Non- Problem</u>	<u>Problem</u>	<u>Problem Not Referred</u>
1. Drinking Pattern Unknown	40%	50%	50%
2. Drinking Pattern	Between Weekly & Monthly	Between Daily & Weekly	Between D & Weekly
3. Prior DUI's	.06	1.1	.28
4. Probation Recommended	86%	93%	71%
5. Length on Job	2.4	1.7	1.7
6. Unknown Prior DUI's	4%	14%	36%
7. L.D.S.	37%	39%	64%
8. Retired, Housewife, etc.	12%	3%	11%
9. M.F. Score	11.2	18.0	17.5
10. Prior Criminal Arrests	.13	1.88	.50
11. Other Race	2%	4%	14%
12. BAC at Arrest	.17%	.24%	.19%
13. Employed Part Time	6%	1%	7%

The three group profiles are significantly different, as measured by an F-test, among themselves. In addition, a pairwise comparison of the group profiles shows that each group profile differs significantly with every other group profile. Those diagnosed as non-problem drinkers tend to be lighter drinkers, have fewer previous DUI convictions to have been employed longer at their present jobs, to be less likely L.D.S., to be more likely

retired, a housewife, or disabled, have a lower Mortimer-Filkins test score, have fewer previous criminal arrests, to be less likely of "other" racial backgrounds, and to have a slightly lower average BAC at time of DUI arrest than problem drinkers. Those diagnosed as problem drinkers and problem drinkers not referred have similar drinking patterns, lengths on present jobs, and Mortimer-Filkins test scores; problem drinkers not referred have fewer prior DUI convictions, are less likely to be recommended for probation are more likely to be L.D.S., are more likely to be retired, a housewife, or disabled, less likely to have had a prior criminal arrest, more likely to be of "other" racial backgrounds, and have slightly lower BAC's at time of arrest than do problem drinkers. It is of interest to note that the discriminant analysis classified 75% of the latter group into the non-problem group and 33% of non-problem drinkers into the problem not-referred group. Therefore, it is reasonable to conclude that there is some overlap between these two groups, and that other criteria not available as data is being used to determine treatment referral recommendations.

The problem not referred profile derived from the 1975 sample differs noticeably from the profile derived from the 1974 sample. The 1974 profile showed this group to have a high degree of prior involvement with the criminal justice system through prior DUI convictions and previous criminal arrests. The 1975 profile showed this prior involvement for the problem not referred group to be significantly less than for the problem drinker group. Evidently, investigators are more likely to recommend treatment for these

individuals now than during ASAP operation or they do not include these individuals in the as candidates for a DUI background investigation as often as before.

There are two variables in the profiles which may be compared to data available concerning drinking drivers involved in fatal crashes. These variables are prior DUI convictions and BAC. For 1975, drinking drivers involved in fatal crashes averaged about .4 previous DUI convictions and an average BAC of .18% These numbers, based on 61 fatal crashes, are not similar as a pair to any of the 3 same pairs from the group profiles. The average BAC is higher for the problem group, and the average number of previous arrests is much lower than for diagnosed problem drinkers and higher than for the other two groups. The difference between previous DUI convictions suggests that diagnosed problem drinkers may be no more a problem as a driver than the social drinker. But since the BAC, while driving is a greater factor in accident involvement than previous driving history, high BAC levels at any given time for any group individual drivers is the most important problem to be addressed by Highway Safety Programs at this time. The following section of this analysis addresses itself to the problem of describing the profiles of individuals who are repeat offenders of the DUI laws in Utah.

A technical summary of the discriminant analysis used in the preceding discussion is presented in Appendix One.

Recidivist Profiles

In the following analysis, no distinction was made as to non-problem, problem, or problem not referred groups. The sample cases were grouped according to whether there had been another DUI arrest made from the time of background investigation and referral until the time sample was collected (3/15/76). A step-wise discriminant analysis was conducted on these two groups. There were 27 repeat offenders and 155 non-repeaters in the sample groups. The following discussion explains five significant variables which can be used to distinguish between these two groups.

1. Other Race.

This variable denotes a social background other than Caucasian, Mexican, Indian, Negro, or Oriental. Almost 19% of the repeaters came from these racial backgrounds, while fewer than 3% of non-repeaters were of these racial backgrounds. Since this variable also discriminated among the three referral groups, it would be appropriate to develop treatment recommendations for individuals of "other" racial backgrounds. This variable accounts for 7% of the variation between the two groups.

2. Race - Negro.

The addition of this variable to the repeater profile increases the explained variation between the profiles by 7%. More than 7% of the repeaters were Negros, while there were no Negros in the non-repeater group. Perhaps this reflects the cultural aspects of the various treatment services available in the ASAP community.

3. Unknown Prior Alcohol Offenses (Excluding DUI).

The inclusion of this variable into the profiles increased

the explained variation between the groups by 2.5%. In more than 37% of the repeater cases, the investigator had failed to collect this information, while the information was missing in about 17% of the non-repeater cases. Such a situation may be indicative of an overall lack of information for some types of individuals which makes a difficult task for the investigator to make appropriate referral recommendations. In any event, there appears to be no reason to exclude this information from the investigation based on the comparison of repeaters and non-repeaters.

4. BAC at Arrest.

The average BAC at arrest for repeaters is found to be .18%, and it is .19% for non-repeaters. Since in the analysis the average was calculated using referrals as a zero BAC, this variable also reflects the number of refusals in each group. It was that 26% of the repeaters refused a BAC test, while 10% of the non-repeaters refused the test. Further, this information was not collected in 30% of the refusal cases, and in 17% of the non-repeater cases. Therefore, it is reasonable to conclude that this information should not be excluded from the background investigations. The inclusion of this variable into the group profiles added 1.8% to the explanation of variation between the groups.

5. Prior DUI Convictions Unknown.

The addition of this variable to the analysis increases the amount of variation explained by the group profiles by 1.5%. The previous DUI history was missing in 22% of the repeater cases and in 13% of the non-repeater cases. Again, there is no evidence,

based upon repeat offenses, that such data should be excluded from the background investigation.

Profile Comparison - Recidivists

There are two basic differences to be observed from the discriminant analysis profile comparisons. One is that effective treatment is not available for racial minorities in the Wasatch Front area. The other is that those individuals for which it is difficult to collect pertinent background data are also the most likely individuals to be repeat DUI offenders. Therefore, it is difficult to develop a meaningful repeater profile due to the lack of this pertinent data. The significant missing data centers on alcohol related variables, previous alcohol offenses (excluding DUI), BAC at arrest, and previous DUI offenses. Therefore, it is logical to recommend to the background investigation agencies in the area that increased attention be given to a complete data collection effort by the investigators.

If the missing data is ignored, it can be shown from the data that repeaters have more previous DUI convictions, fewer previous other alcohol offenses, the same likelihood of having been placed on probation, are less likely to be L.D.S., report the same drinking patterns, have the same income level on the average, have similar Mortimer-Filkins test scores, are the same ages and sex, have the same average marital status, have been working at their present jobs about the same length of time, and have more previous criminal arrests than do the non-repeaters. It was also determined that the average length of time the next arrest was less than 3 months for

the repeaters. It appears that the background data concerning previous types of offenses is most relevant to the analysis of repeat offenders.

A technical summary of the discriminant analysis used in the preceding discussion is presented in Appendix One.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Pre-sentence investigators accurately categorize drinkers into appropriate categories. Both investigator, self-report, and discriminant analysis confirm the overall importance of prior DUI arrests as an important indicator of problems with alcohol. However, investigators tend to diminish the importance of reported drinking pattern, while the discriminant analysis indicates that this variable does distinguish between social drinkers, problem drinkers and problem drinkers not referred.

Even though investigators were in agreement on what constitutes problem drinking, there was little agreement on referral practices; i.e., to which modality they would suggest to the judge. The differences probably reflect personal attitudes toward treatment and unless one can show a significant positive change as a result of treatment, little advantage would be found by standardizing the referral process. On the other hand, a case could be made for referring and following through most problem drinkers, because, on a personal basis, some may benefit although the changes may not be demonstrable from available data.

Lack of follow-through in treatment programs is a substantial problem. Less than half the probationers sampled whose pre-sentence investigators recommend treatment or evaluation ever became involved with a treatment program. It is difficult to make any comparative statement about the effectiveness of treatment when such a large proportion of those referred do not participate. Furthermore, such a low follow-through rate is not conducive to an impression of control and probably works to erode the perception that one must comply with the terms of probation. It is strongly recommended that responsibility for follow-through be defined. However,

with high case loads and ambivalence with which investigators view treatment, procedures should not add to administrative hassle or the result would probably be to reduce the number of referrals rather than to increase follow-through on the existing referral case load.

The Ogden City "First Offender Program" (See Page 11) appears to be an effective way of dealing with persons arrested for DUI for the first time. Only 2 out of 110 true first offenders were rearrested for DUI during the study period (January 1974 through April 1975), while eight from a sample of first offenders arrested in Weber and Davis County and receiving the same treatment, and also, license retention and plea reduction were rearrested during the same period. Unfortunately, it is not possible to assess the extent to which this alternative is being used in Wasatch Front counties since the recorded conviction is reckless driving. It may be that the practice will become widespread, and since courts, other than Ogden do not send in probation status reports, the actual number of DUI convictions will become clouded.

The relationship between the Judges and Adult Probation and Parole has steadily improved. More J.P.'s in Salt Lake County are referring to Adult Probation and Parole and the City Court Judges continue to refer regularly which speaks well for the quality of services. In the Northern Region, more J.P.'s began referring in 1974 and the City Judges rely completely on Adult Probation and Parole.

An independent analysis of the ASAP School concluded that the six-week series was superior to six-month series. More information was gained and fewer failures reported in the six-week series. However, interaction could be improved by becoming less content oriented and by separating problem and

social drinkers.

As confirmed by discriminant analysis, pre-sentence investigators do an excellent job of classifying drinkers into identifiable categories. The persons so classified can be efficiently referred to appropriate treatment groups. Persons classified as social drinkers were rearrested 6% of the time during the study period, while 19% of those classified as problem drinkers were rearrested and 30% of those classified as problem-not-referred were rearrested. It appears that those with the highest recidivism rate receive the least attention. Unfortunately, this group is difficult to deal with, often having prior probation failures or evincing strong hostility to treatment. The investigator often recommends no probation (26 out of 70 cases) assuming that the Judge will assign a jail sentence. This, the strongest sanction is applied to the most recalcitrant group which seems logical. However, if there is an effect on recidivism, it doesn't appear overly dramatic.

Social drinkers show low recidivism rates, and school is an appropriate referral source. It may well be that school has little effect on problem drinkers (19% recidivism) and if resources become strained, little would be lost by restricting schools to social drinkers only.

Within each group of drivers referred by the Courts for pre-sentence investigation, the recidivists differ in profile from the non-recidivists. Recidivists are more likely to be problem drinkers, on welfare, and widowed, than were non-recidivists. Therefore, it would be possible for parole officers to selectively follow-up probation compliance using profile variables. Experimentation with different types of treatment for the recidivist groups could lead to decreased recidivism rate for these groups,

and, therefore, an overall decreased recidivism rate.

It would be possible to consider the problem drinker who is not referred for treatment group as two separate sub-groups, based on age. Both these groups represent potentially dangerous drinking drivers with high probabilities of repeat convictions. Further study of these groups and attempts at finding successful treatment is warranted because of the apparent potential for crash involvement.

Interestingly, those referred for PSI differ significantly from the drinking driving population identified in the Roadside Survey. Presumably better educated and financially solvent DUI's might benefit from increased exposure to education and treatment as much as their disadvantaged brethren. The problem is not particular to the probation department, but rather is endemic to the entire criminal justice system.

APPENDIX ONE

Summary of Discriminant Analysis Results

DATA PREPARATION

Data concerning the descriptors of individuals referred for pre-sentence investigation in Salt Lake County were coded, keypunched, and edited. The list of these data elements is found in Appendix Two. Three groups of individuals are recorded in Salt Lake County; they are non-problem drinkers, problem drinkers, and problem drinkers for whom treatment is not recommended. The total sample size was 182.

The above data were transformed into a format suitable for the discriminant analysis algorithm in the statistical package for the Social Sciences series of statistical programs. This essentially amounted to making binary variables for each category of those variables which were measured on a classification basis. Examples of such variables are religion, sex, job status, etc. There was a substantial amount of missing data for some variables. A binary variable for unknown or missing data was generated for each variable; therefore, the status of the data available for each variable was used as a variable. The final number of variables used in the analysis was 54. The listing of these variables can be found in Appendix Two of this study.

Variable Selection Method

The S.P.S.S. algorithm is a stepwise procedure based on multivariate analysis of variance and the Mahalanobis Distance function. The F-value for inclusion or deletion of a given variable is 2.0. On the basis of this criterion, 13 variables were sequentially selected

for discrimination. A total of 15 steps in the procedure were used, but 1 of the variables was removed.

SUMMARY TABLE

REHABILITATION GROUPS ANALYSIS

STEP NUMBER	VARIABLE ENTERED REMOVED	F TO ENTER OR REMOVE	NUMBER INCLUDED
1	V23 Prior DUI's	15.22208	1
2	V24 Unknown Prior DUI's	9.23097	2
3	V54 Length on Job	9.68412	3
4	V58 Probation	8.02485	4
5	V42 Retired, Housewife, etc.	6.05718	5
6	V43 Student	5.39476	6
7	V33 LDS	4.46677	7
8	V18 M.F. Score	3.10906	8
9	V27 Prior Criminal	2.78506	9
10	V17 Other Race	2.67343	10
11	V57 Drink Pattern Unknown	2.65412	11
12	V56 Drink Pattern	15.37441	12
13	V43	1.63600	11
14	V20 BAC	2.11675	12
15	V40 Part Time Employment	2.31566	13

The same S.P.S.S. algorithm was used to analyze the repeated non-repeater groups. A total of 5 steps in the procedure were used.

SUMMARY TABLE

RECIDIVIST GROUPS ANALYSIS

STEP NUMBER	VARIABLE ENTERED REMOVED	F TO ENTER OR REMOVE	NUMBER INCLUDED
1	V17 Other Race	13.19024	1
2	V13 Negro	13.87752	2
3	V26 Unknown Prior Alcohol	5.31685	3
4	V20 BAC	3.96131	4
5	V24 Unknown DUI	3.45478	5

APPENDIX TWO

Data Element Listing

CODING INSTRUCTION SHEET

<u>FIELD NAME</u>	<u>CODING</u>	<u>COLUMN</u>	<u>MEANING</u>
GROUP TYPE	1 2 3	1	NON-PROBLEM PROBLEM REFERRED PROBLEM NOT REFERRED
ARREST DATE			
MONTH	1-12	2-3	
DAY	1-31	4-5	
YEAR	00-99	6-7	
AGE	00-99	8-9	AGE IN YEARS
SEX	1 2	10	MALE FEMALE
MARITAL STATUS	1 2 3 4 5 6	11	SINGLE MARRIED SEPARATED DIVORCED WIDOWED UNKNOWN
RACE	1 2 3 4 5 6	12	CAUCASIAN NEGRO MEXICAN INDIAN ORIENTAL OTHER
MF SCORE	00-99 99	13-14	SCORE UNKNOWN
BAC	00-49 50 99	15-16	% OF ALCOHOL IN BLOOD REFUSAL UNKNOWN
PRIOR DUI	00 1-90 99	17-18	NONE NUMBER UNKNOWN
PRIOR OTHER ALC/REL	00 1-90 99	19-20	NONE NUMBER UNKNOWN
PRIOR OTHER CRIME	00 1-90 99	21-22	NONE NUMBER UNKNOWN
NUMBER OF MARRIAGES	0 1-8 9	23	NONE NUMBER UNKNOWN

<u>FIELD NAME</u>	<u>CODING</u>	<u>COLUMN</u>	<u>MEANING</u>
EDUCATION	1	24	PROFESSIONAL/GRADUATE SCHOOL
	2		FOUR YEAR COLLEGE GRADUATE
	3		1-3 YEARS OF COLLEGE
	4		HIGH SCHOOL GRADUATE
	5		10-11 YEARS OF SCHOOL
	6		7-9 YEARS OF SCHOOL
	7		UNDER 7 YEARS OF SCHOOL
	8		UNKNOWN
RELIGION	1	25	LDS
	2		PROTESTANT
	3		CATHOLIC
	4		JEWISH - NON CHRISTIAN
	5		NONE
	6		UNKNOWN
LABOR FORCE STATUS	1	26	EMPLOYED FULL TIME
	2		EMPLOYED PART TIME
	3		UNEMPLOYED
	4		ILL, INJURED, RETIRED, HOUSEWIFE
	5		STUDENT
	6		UNKNOWN
OCCUPATION	1	27	EXECUTIVES OF LARGE CONCERNS,
	2		PROPRIETORS, PROFESSIONALS,
	3		BUSINESS MANAGERS, PROPRIETORS OF MEDIUM
	4		SIZED BUSINESSES, LESSER PROFESSIONALS.
	5		ADMINISTRATIVE PERSONNEL, OWNERS OF
	6		SMALL BUSINESSES, MINOR PROFESSIONALS.
	7		CLERICAL, SALES WORKERS, TECHNICIANS,
	8		OWNERS OF LITTLE BUSINESSES.
	9		UNSKILLED EMPLOYEES.
	0		WELFARE
			UNKNOWN
INCOME	1	28	LESS THAN \$2,000
	2		\$2,000 TO \$3,999
	3		\$4,000 TO \$5,999
	4		\$6,000 TO \$7,999
	5		\$8,000 TO \$9,999
	6		\$10,000 TO \$11,999
	7		\$12,000 TO \$13,999
	8		\$14,000 TO \$15,999
	9		\$16,000 OR OVER
	0		UNKNOWN
LENGTH OF TIME ON JOB	1	29	OVER THREE YEARS
	2		1 TO 3 YEARS
	3		6 MONTHS TO 1 YEAR
	4		6 MONTHS OR LESS
	5		UNEMPLOYED
	6		UNKNOWN

<u>FIELD NAME</u>	<u>CODING</u>	<u>COLUMN</u>	<u>MEANING</u>
DRINKING PATTERN	1	30	3 OR LESS TIMES A YEAR
	2		3-6 TIMES A YEAR
	3		ONCE A MONTH
	4		AT LEAST ONCE A WEEK
	5		DAILY
	6		UNKNOWN
PROBATION RECOMMENDED	1	31	YES
	2		NO
TIME TO SUBSEQUENT ARREST	1-17	32-33	NUMBER OF MONTHS
	18		NO ARREST

COL. NO.	NAME	VAR. NO.
1	Group Type	NA
2-3	Arrest Month	1
4-5	Arrest Day	2
6-7	Arrest Year	3
8-9	Age	4
10	Sex	5
11	Single (Binary)	6
12	Married (Binary)	7
13	Separated or Divorced (Binary)	8
14	Widowed (Binary)	9
15	Unknown Status (Binary)	(Not included in Analysis)
16	Caucasian (Binary)	10
17	Negro (Binary)	11
18	Mexican (Binary)	12
19	Indian (Binary)	13
20	Oriental (Binary)	(Not included in Analysis)
21	Other Race (Binary)	(Not included in Analysis)
22-23	MF Score	14
24	Unknown MF (Binary)	15
25-26	BAC	16
27	Refusal (Binary)	17
28	BAC Unknown (Binary)	18
29-30	Prior DUI's	19
31	Unknown Priors (Binary)	20

32-33	Prior Other Alcohol Offenses	21
34	Unknown Other (Binary)	22
35-36	Prior Criminal	23
37	Unknown Criminal (Binary)	24
38	No. Marriages	25
39	Unknown Marriages (Binary)	26
40	Education	27
41	Education Unknown (Binary)	28
42	LDS (Binary)	29
43	Protestant (Binary)	30
44	Catholic (Binary)	31
45	Jewish or Non-Christian (Binary)	32
46	None (Binary)	33
47	Unknown Religion (Binary)	34
48	Employed (Binary)	35
49	Employed Part Time (Binary)	36
50	Unemployed (Binary)	37
51	Retired, Housewife, Etc. (Binary)	38
52	Student (Binary)	39
53	Unknown (Binary)	40
54	Executive, Professional (Binary)	(Not included in Analysis)
55	Business Manager (Binary)	41
56	Administrator (Binary)	42
57	Clerical (Binary)	43
58	Laborer (Binary)	44

59	Welfare (Binary)	45
60	Unknown (Binary)	46
61	Income	47
62	Income Unknown (Binary)	48
63	Length on Job	49
64	Unknown Length (Binary)	50
65	Drink Pattern	51
66	Drink Pattern Unknown (Binary)	52
67	Probation (Binary)	(Not included in Analysis)
68-69	Time to Next Arrest	53
70	No Subsequent Arrest (Binary)	54