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SAN ANTONIO
ALCOHOL SAFETY ACTION PROJECT
TECHNICAL SUMMARY
1971 - 1976

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Contract No. DOT HS-049-1-065
Contract Amt. \$3,258,683



PRINTED APRIL 1979
FINAL REPORT

Document is available to the U.S. public through
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Springfield, Virginia 22161

Prepared For

U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Washington, D.C. 20590

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1. Report No. DOT HS 803 132	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle SAN ANTONIO ALCOHOL SAFETY ACTION PROJECT Technical Summary		5. Report Date May 1977	
		6. Performing Organization Code	
7. Author(s) Kenneth F. Langland—ASAP Project Director Thomas E. Hawkins and Charles B. Dreyer—Southwest Research Institute		8. Performing Organization Report No.	
9. Performing Organization Name and Address San Antonio Alcohol Safety Action Project 303 South Alamo Street San Antonio, Texas 78205		10. Work Unit No.	
		11. Contract or Grant No. DOT-HS-049-1-065	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration 400 Seventh St. SW Washington, D.C. 20590		13. Type of Report and Period Covered Final Report 1972-1976	
		14. Sponsoring Agency Code	
15. Supplementary Notes While every attempt has been made to make this a <i>stand alone</i> document, it should be recognized that an Alcohol Safety Project encompasses a wide spectrum of activities, which are integrated into a total system. A full appraisal of effectiveness can only be made after a careful review of all the Evaluation Reports and the Final Reports of the Project Director.			
16. Abstract <p>This document summarizes the activities undertaken by the San Antonio Safety Action Program during the years 1972 through 1976 and the principal results and findings of the efforts in the major countermeasure areas. A more detailed treatment of activities and results in each countermeasure area is contained in the analytic studies referenced for each section of this report.</p> <p>Section A presents a summary of the objectives established for each countermeasure during the initial 3-year program (1972-1974) and the continuation period (1975-1976). Overall objective results are detailed in Analytic Study No. 1-2, Analysis of Overall Project Impact. Section B is a summary of enforcement findings, catalytic impacts, and potential applications of findings; additional information is contained in Analytic Study No. 3, Analysis of Enforcement. Section C summarizes the findings, catalytic impact, and potential applications of efforts in adjudication. These efforts are more fully documented in Analytic Study No. 4, Analysis of Adjudication. Section D briefly describes ASAP efforts in the area of problem drinker evaluation. These efforts are more fully discussed in Analytic Study No. 5-6, Analysis of PDE and Rehabilitation. Section E presents a summary of rehabilitation findings, catalytic impact, and potential applications. This topic is also included in Analytic Study No. 5-6, Analysis of PDE and Rehabilitation. Section F outlines activities and results of the Public Information and Education countermeasure. A detailed discussion is presented in Analytic Study No. 7, Analysis of Public Information and Education. Section G summarizes the ASAP elements which have been continued beyond termination of the federally funded program. These elements are more completely discussed in the Project Director's Report.</p>			
17. Key Words		18. Distribution Statement Document is available to the U. S. public through the National Technical Information Service, Springfield, Virginia 22161	
19. Security Classif. (of this report) UNCLASSIFIED	20. Security Classif. (of this page) UNCLASSIFIED	21. No. of Pages 25	22. Price ----

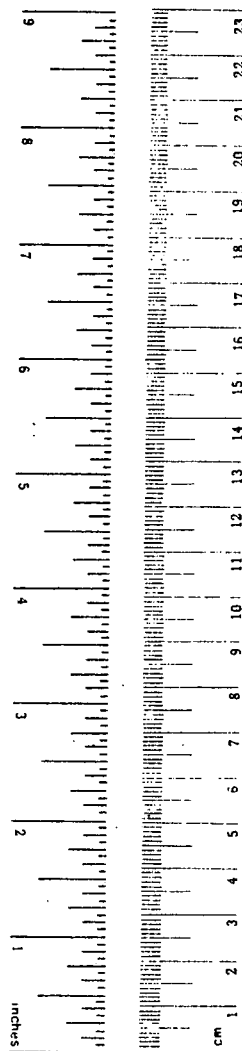
METRIC CONVERSION FACTORS

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



* 1 in = 2.54 (exact). For other exact conversions, and more detailed tables, see NBS Mon., Publ. 286, Units of Weights and Measures, Rev. 5-2-75, NIST Catalog No. C-1-10-286.

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TECHNICAL SUMMARY

A. Background

1. Project Objectives and Needs

With research indicating that alcohol consumption was a factor in at least half of the traffic fatalities recorded throughout the nation each year, there was little question of the need for programs aimed specifically at the detection, apprehension, adjudication, and rehabilitation of abusive drinker/drivers and education of the general public. The National Highway Traffic Safety Administration response to this need was the creation and support of 35 local Alcohol Safety Action Programs, designed to assist selected communities to develop comprehensive, multi-faceted programs to significantly decrease the occurrence of DWI's in their areas.

The City of San Antonio was one of the initial 35 sites selected for a 3-year NHTSA supported ASAP, and was one of 10 selected for an additional 2-year continuation program for further development and evaluation of the existing program. The primary objective of the San Antonio ASAP was: "Through close coordination of all countermeasure actions, to seek the most effective, practical, and economical countermeasures to achieve a substantial reduction in the number and severity of traffic accidents caused by drinking drivers, which may be established as a permanent traffic safety program for San Antonio and Bexar County."

2. Objectives of Initial Three Years Project

To aid in the achievement of the primary goal of the San Antonio ASAP, program activities were established in five major countermeasure areas. These areas, and the objectives of each, were:

- **Project Management.** The objective of this activity was: "To coordinate all countermeasure activities, to provide staff management and administration, and control efficient and productive expenditures of funds to achieve the project objective."
- **Enforcement.** Enforcement activities were conducted in two major areas. The objective of the **training** effort was: "through extensive training in the severity of drinker-driver problems and effective enforcement procedure, to provide additional expertise necessary for a substantial increase in the rate of detection, apprehension, and conviction of drinking drivers." **Selective enforcement** had as its objective: "Through effective use of trained officers working overtime during periods of high incidence of drinking drivers, to increase the rate of detection, apprehension, and conviction of drinking drivers."
- **Judicial.** The judicial countermeasure was designed to assist the courts in three areas. The objective of **prosecution** activities was: "through the use of additional assistant district attorneys to improve the quality and timeliness of the preparation and prosecution of the increased caseload for persons charged with driving while intoxicated and driving while license is suspended or revoked." **Court services** were provided to: "through the use of additional court services to improve timeliness of preparation and adjudication of the increased DWI caseload." **Probation** activities' stated objective was: "to ensure compliance with

the conditions of their probation by those defendants found guilty of DWI and placed on probation.

- **Rehabilitation.** This countermeasure provided three types of rehabilitation modalities. The objective of the **Alcohol Information and Driver Education (AIDE)** school was "through group education of court-referred drinking drivers to minimize reoccurrence of alcohol-related driving events." The **Alcohol Treatment Program** was established "to reduce the recidivism rate of court-referred problem drinking drivers through the use of coordinated rehabilitation facilities." **Diagnosis and Level II Rehabilitation** had as its objective, "to reduce the DWI recidivism rate of drivers who were developing a drinking problem and to prevent the regression of problem-developing drinkers into problem drinkers."
- **Public Information and Education.** Activities in this countermeasure were conducted in three areas. The **mass media** campaign had as its objective: "through a comprehensive, multi-faceted mass media campaign, to promote and publicize the ASAP while focusing public attention and action to the hazard of the problem drinker-driver." The purpose of **citizen involvement** was: "through person-to-person contact, speeches, and other special attention, develop interest and support for ASAP and motivate and activate elected officials, business leaders, clergy, educators, clubs, organizations, and other interested citizens." Efforts were also directed at **drivers education** "to function as a catalyst to expand factual information provided students concerning alcohol and driving in order to assist in the development of good personal philosophy."

3. Objectives of 2-Year Continuation Project

The primary objective of the San Antonio ASAP remained consistent with that of the initial 3-year program. This program, implemented from January 1972 through December 1974, had largely accomplished the demonstration aspects of the program. Several of the elements were ready for conversion and establishment into the city-county organizational structure. Other elements, particularly the overtime ASAP patrols, the Alcoholic Treatment Program, and the Alcohol Information and Drivers Education school, had been demonstrated to be practical and economical, but a definitive evaluation of their effectiveness had not yet been demonstrated. Emphasis during the continuation period was, therefore, placed on further evaluation of these countermeasures and the conversion and establishment of ASAP into the local organizational structure to the greatest extent possible.

In view of the purpose of the 2-year continuation project, the objectives of the major countermeasure areas could be stated as follows:

- **Project Management:** to continue and improve the coordination between the various ASAP countermeasures and to promote the establishment of ASAP activities in the city-county organizational structure.
- **Enforcement:** to reduce alcohol-related accidents in San Antonio through saturation patrolling techniques employed by ASAP patrols in accordance with carefully-designed research plans (Selective Enforcement); and to substantially increase the historical SAPD regular patrol DWI arrest rates to provide a transition into the enforcement component of the San Antonio DWI countermeasure system in the post-selective enforcement period.

- **Judicial:** to develop an equitable DWI adjudication system in Bexar County and to permit a definitive evaluation of DWI rehabilitation modalities through regular referral of potential DWI probationers to problem drinker evaluation, acceptance of valid PDE diagnosis and rehabilitative recommendations, and random assignment of these probationers to the appropriate treatment or control group.
- **Rehabilitation:** through a complete range of social and problem drinker treatment modalities, to help the client control his drinking problem and thereby minimize his driving while intoxicated; and to conduct controlled rehabilitation experiments to provide a definitive rehabilitation effectiveness evaluation.
- **Public Information and Education:** to continue activities aimed at informing and educating the general public, drinking drivers, and the youthful drivers of the hazards and problems of the drinker-driver; and to conduct a controlled experiment to provide a definitive youth education effectiveness evaluation.

B. Summary of Enforcement Findings

1. Initial Period (1971-1974)

Enforcement consisted of two countermeasures: enforcement training and selective enforcement. During the initial 3 years, the program expended \$1,009,686; of the total, \$959,282 was used for selective enforcement. Training was conducted initially in 1971, and again in 1972. Selective enforcement patrolling was conducted every night during 1972-1974. The result in terms of DWI arrests was a 450-percent increase over historical levels. This increase came predominantly from the selective enforcement patrols, but the effect of training and using officers of the regular forces on an overtime basis had the desired catalytic impact.

The administrative evaluation of enforcement indicated that the countermeasures operated essentially as planned. A dramatic increase in DWI arrests resulted in 1972, with some decrease in numbers of DWI arrests, but a decrease in patrol hours per DWI arrest during the last 2 years. Not all expenditures for capital equipment were cost-effective. Mobile vans and video-tape units were poor investments, while chemical breathtesting equipment was a wise choice. Finally, the decision to initially procure only ten patrol vehicles constrained ASAP below optimum force levels on Friday and Saturday nights.

The scientific evaluation of the overall effectiveness of the ASAP enforcement countermeasure activity area was accomplished by two special experiments and two longitudinal trend analyses. All four scientific methodologies were intended to contribute to the answer of one major research question: *What level of enforcement is required to substantially reduce fatal and injury crashes caused by drunk drivers?* Unfortunately, this basic question remained unanswered.

--In 1973, in cooperation with the San Antonio Police Department, a field experiment was designed to correlate arrest patterns with potential arrestees derived from the Voluntary Roadside Survey. The results of this "alternative force level" experiment revealed that the major factor in patrol detection and efficiency was the enthusiasm and motivation of the officers on patrol; there was excellent consistency in correct apprehensions; and the probability of arrest for DWI was in direct proportion to the number of units on patrol. As a generalization, for a patrol density of 1 unit/10 square miles, the probability of arrests were 1/1000 and 1/400 for BAC levels of 0.10 to 0.14 and over 0.15, respectively.

During 1974, three different saturation patrol experiments were conducted. A reduction in accidents during the first saturation patrol experiment indicated that saturation patrolling shifted alcohol-related accidents away from the saturated areas, and that there was a 2-month residual effect on accident rates. However, the two other saturation experiments failed to show any statistically significant reductions.

Monthly, nighttime fatal and injury accident data for a 6-year period were analyzed by the Box-Jenkins technique. However, fatal accidents were too few for application of this technique, and injury accidents showed a random fluctuation. Classical statistical tests for significance also were conducted. No effect of the ASAP selective enforcement patrols was evident in the total or single-vehicle fatal or total injury accident data. However, analysis of single-vehicle injury accidents disclosed a reduction, which bordered on statistical significance.

Voluntary roadside surveys were conducted annually in 1971-1974. There was no longitudinal trend in the percentage of drivers surveyed who were impaired (≥ 0.05 percent) or "bombed" (≥ 0.15 percent). However, for drivers who were DWI (≥ 0.10 percent), the percentage dropped from 12.9 percent in 1971, to 10.7 percent during the first two ASAP years, and then increased to 11.8 percent in 1974. These reductions were not statistically significant. However, the fact that the decline in activity in both selective enforcement and public information and education in 1974 coincided with the observed DWI percentage increase suggested that ASAP enforcement had a marginal impact on the overall level of DWI.

2. Continuation Period (1975-1976)

Selective enforcement activities for the continuation period were implemented in five areas: training of additional officers, evaluation patrols on weekend nights on selected sections of the expressway system, evaluation patrols on all nights in city evaluation areas, city-wide roving patrols on all nights of the week, and saturation patrols on all nights of the week on four segments of the expressway system.

DWI arrests by selective enforcement patrols during 1975 and 1976 were somewhat less than in previous years. This decrease was due to a lower level of effort rather than a decline in the efficiency of selective patrol activities; DWI arrests per man-hour of patrol effort were consistent with that of previous years. During 1975, eight patrol man-hours of selective enforcement resulted in 1.1 misdemeanor arrests (including DWI), 4.8 traffic citations, and 0.2 felony arrests. During 1976, this level of effort resulted in 0.87 misdemeanor arrests (DWI and others), 5.10 traffic citations, and 0.01 felony arrests. Compared with the data of other ASAP sites, this was an efficient enforcement program.

An analysis was performed to determine the effect of ASAP training on the number of DWI arrests made while on regular patrols. Performance data on a group of officers selected for ASAP training were collected for a 6-month period prior to the training. These data were then compared to performance data for the 6-month period following training. Results of the analysis showed that the criteria used for selection was appropriate for locating highly motivated officers and the training was effective in increasing the arrest rate of these officers. However, the analysis also showed that continuous monitoring was required to sustain the high level of DWI arrest productivity, even for highly trained and motivated personnel.

The effectiveness of the use of citizen band radios in assisting selective enforcement patrols was determined by an analysis of the extent of activity generated by the CB units and a

comparison of patrol man-hours per DWI arrest for equipped and non-equipped patrol units. The data indicate that the presence and use of CB radios result in officer involvement in non-DWI activities to a somewhat higher degree than that experienced by those not equipped with the units. It was concluded that the use of CB radios to apprehend DWI offenders is not cost-effective in urban areas of high traffic density.

The cost-effectiveness of ASAP selective enforcement patrols was determined through analysis of expenditures incurred and revenues gained from DWI arrests and adjudication. Total allocable costs for the enforcement effort during 1975-1976 were \$600,000 and total revenues generated were \$968,000, resulting in a net revenue per DWI of approximately \$56. This net revenue from enforcement activities was nearly sufficient to offset federal and local matching funds expended for project management, the problem drinker evaluation center, and public information and education. It was concluded that, with minor policy changes, the City of San Antonio and the County of Bexar could together develop a financially self-sufficient DWI control system.

Selective enforcement evaluation patrols were conducted on all nights for six months in each of two city evaluation areas. Four units were on patrol on weekday nights, and six units were deployed on weekend nights during both studies. Analysis of patrol hours per DWI, accident data, BAC levels, and street crime data from Evaluation Area A (7 square miles, densely populated) indicated that a force level of 4 to 6 units was marginally effective in reducing accidents but did not have a positive impact as measured by the other parameters. Analysis of Evaluation Area B (37 square miles, sparsely populated) showed the 4- to 6-unit level of enforcement to be insufficient to produce a deterring effect on abusive drinking-driving or on street crime.

The analysis of weekend expressway patrol activities was conducted in two parts, paralleling the two strategies applied to the expressway system from July 1975 through June 1976. During the first 6 months, five expressway segments totaling 19.3 miles in length were patrolled each weekend, using ten units on Friday and Saturday nights and four units on Sunday nights. Evaluation of patrol man-hours per DWI, BAC levels, and monthly and cumulative traffic accident data indicated that the patrol level applied was marginally effective in reducing fatal and injury accidents. However, there was no impact on the percentage of DWI's. During the final six months, a total of 37 miles of expressway was patrolled at the same level of effort; evaluation of data showed the levels of patrol to be insufficient to have any deterring effect on abusive drinking-driving.

During the last six months of 1976, all ASAP patrol efforts were concentrated on patrolling four expressway segments totaling 24.4 miles in length. Patrols were conducted each night of the week; 10 units were used Sunday through Wednesday, 12 units patrolled on Thursday, and 16 units were dispatched Friday and Saturday nights. Analyses of monthly and cumulative traffic accident data showed that the presence of additional units during all nights of the week had a significant impact on the number and severity of accidents, particularly on those segments from 4 to 6 miles in length.

3. Catalytic Impact

During the year (1971) prior to ASAP, the regular forces of the San Antonio Police Department arrested 1130 DWI's. The catalytic effect from using overtime officers on selective enforcement was apparent in the initial 3 years of ASAP operation, when there was a 63-percent increase in DWI apprehensions over historical levels. During 1975, the increase over the 1971 level was 81 percent; in 1976, it was 95 percent. After 5 years of ASAP influence, it would seem reasonable to expect that there has been achieved a permanent gain in regular patrol DWI arrest patterns.

Even without ASAP selective enforcement, DWI arrests by the San Antonio Police Department and other enforcement agencies within Bexar County should continue at or above an annual rate of 2500 for several years; this would represent 5 to 6 DWI's per 1000 licensed drivers.

4. Potential Application of Findings

The activities undertaken in enforcement over the 5-year San Antonio Alcohol Safety Action Program provided considerable insight into those activities which were essential or could have greatest impact. Among the findings which could be of greatest benefit to the initiation and operation of locally funded ASAP's were:

- The early and continued support of police officials is essential to the success of the enforcement countermeasure. Further, without an effective enforcement countermeasure, other ASAP activities will be largely futile. Without viable police support and activity, community reaction to the program will be, at best, neutral.
- Special police training in identifying, apprehending, and processing DWI's is a major factor in increasing the number and improving the quality of arrests. Continuing in-house training of regular patrol officers is considered essential to maintaining a motivated force familiar with the latest techniques and equipment.
- The use of special overtime forces during nighttime hours is effective in increasing the number of DWI arrests. However, such activities should be initiated at a level which can be sustained over a long period of time if a significant permanent impact is desired.
- In order to be effective, ASAP must provide for increased cooperation between police departments and the courts. The ASAP systems approach is preferred to isolated enforcement efforts if it can provide solutions to the problems connected with the waste of police time in trial appearances and the presence of unwarranted dismissals of cases and inequitable, informal plea negotiation.
- In order to survive in the political arena, selective enforcement must have very firm community support or it must be oriented to all geographic areas to avoid adverse reaction from ethnic areas.

A large amount of information on enforcement has been developed by the various federally funded ASAP's and by NHTSA; this information is available for local use. It is recommended that local ASAP's become familiar with the information available at the national level and make use of it to the maximum extent possible. However, it must be remembered that the greatest success can be achieved with programs which are tailored to local conditions or modified and amended to reflect local support.

C. Summary of Judicial Findings

1. Initial Period (1971-1974)

Adjudication consisted of two countermeasures: **Prosecution**—additional assistant district attorneys and a supervisory district attorney; **Court Services**—a court coordinator and

additional court dockets. During the initial 3 years, Prosecution expended \$126,278, while Court Services required \$45,879. It should be noted that there was no Probation Countermeasure. Despite the fact that early (1971) agreements were reached between the Adult Probation Office and ASAP, it was never possible to convert them into an integrated approach.

The administrative evaluation was limited to a comparison of dispositions against preset performance estimates. Few performance estimates were met, dismissal rates were higher than planned, and conviction rates were lower than planned. Essentially, throughout most of the initial 3 years, the Bexar County Courts-at-Law continued to operate as they had in the past. Even though the system reacted reasonably as planned, there was a mounting court backlog in 1972. With the addition of a supervisory district attorney and the introduction of AlcoLearn in 1973, dispositions began to approach DWI arrests. There was a substantial deterioration of court activity in 1974 due to the fact that all three County judges were running for election. Unquestionably, the AlcoLearn program was the key element which kept dispositions close to arrests. Under AlcoLearn, participating individuals ($BAC \leq 0.14$ and not more than two prior alcohol-related offenses) received a reduced charge conviction in return for successful completion of the ASAP-AIDE school.

The scientific evaluation of the Diagnosis-Referral-Rehabilitation System was designed to: develop the degree of change of dispositions from baseline to operational years; determine profiles of disposition groups; develop the changes in processing times from baseline to operational years; and determine what effects alternative judicial dispositions had on subsequent driving behavior. A random sample of 100 DWIs arrested in January was selected for each year and pre-arrest tracked for 3 years and post-arrest tracked for 1 year.

Overall, approximately 40 percent of the possible cases were referred to ASAP. Its involvement in the adjudication process, while substantial, clearly had much room for improvement. Several conclusions could be drawn from the statistical analysis of the distribution of dispositions.

- Sanctions that were imposed underwent little or no change during ASAP. Jail sentences were infrequent and light. License suspensions were rare. Fines, amounting to about \$75 on the average, remained the primary sanction.
- There was a tendency for the judges to award increasingly stiffer dispositions with increasing BAC levels. However, a refusal to take the BAC test resulted in lesser sanctions.

Analysis of processing time to disposition indicated that the adjudication system was able to accommodate the tremendous increase in DWI arrestees. Processing time increased drastically in 1972, but had returned to pre-ASAP averages by 1973. The additional personnel funded and new procedures instituted by ASAP achieved their purpose.

The analysis of subsequent behavior was generally inconclusive, and no findings were statistically significant. However, the trends were in the direction of lower DWI recidivism rates and somewhat lower subsequent accident rates both for the ASAP clients receiving PSI and Rehabilitation and PSI, but no Rehabilitation.

It could be concluded that ASAP had no major impact on the Traffic Safety System. However, considering the situation before ASAP, the total independence of the judiciary and its reluctance to change, ASAP made substantial progress in preparing the system for major change. The 3 years of the initial ASAP demonstration simply were not enough to bring about the degree of change originally contemplated.

2. Continuation Period (1975-1976)

Adjudication activities for the continuation period involved the processing of DWI cases by the Bexar County District Attorney as a reduction in charge to public intoxication after successful completion of a prescribed course of ASAP instruction, and by the Bexar County Courts-at-Law on the original DWI charge. In addition, the District Attorney and four of the five Courts-at-Law participated from April 1975 to March 1976 in a research experiment to permit a valid assessment of the effectiveness of the ASAP-sponsored rehabilitation modalities. The research design required the random assignment of clients into treatment-no treatment groups as determined to be appropriate by the Problem Drinker Evaluation Center operated by ASAP.

Total dispositions and the outcomes for the continuation period followed the patterns of the initial ASAP years. Between 75 to 80 percent of the outcomes resulted in probation for a DWI conviction or a reduced charge conviction; both of these results provided an opportunity for ASAP diagnosis, referral and rehabilitation. The rejected-dismissed outcome remained at about 13 percent, which was considered high but was primarily the result of plea-bargaining on multiple charges.

All three key ratios, which measured the extent to which the system handled its extraordinary caseloads and the degree to which the diversionary ASAP system was utilized for charge reductions, held steady or improved during the continuation period. The backlog/disposition and dispositions/booked DWI ratios both indicated that the judicial system was effective in handling the workload generated by ASAP. The District Attorney, while using charge reduction as a mechanism to help control backlog, wholeheartedly supported the ASAP concept by referral of 75 percent of the reduced charges to an ASAP rehabilitation modality.

Analysis of the degree to which the judicial system cooperated in the random assignments required by the research design indicated an overall compliance of 95 percent. The cooperation of the County Courts-at-Law judges and the District Attorney in meeting the requirements of a rigorous research design was exemplary.

The scientific evaluation of adjudication, which was based on a detailed analysis of a sample of 100 DWI's arrested in January of each year, confirmed the previous findings that the judicial system made extensive use of the ASAP concepts during the continuation period; over 60 percent were referred to the Problem Drinker Evaluation Center and over 55 percent were referred to an ASAP rehabilitation modality.

3. Catalytic Impacts

When ASAP first started, no one was aware of the magnitude of change which would have to be made in the attitudes, procedures, and goals of the "lower court" criminal justice system. Starting from an emphasis on traditional systems, where either the judge or the prosecutor was only a trier-of-fact and an imposer of sanctions prescribed by statutes, ASAP oriented the system towards the health/legal approach, wherein the adjudication participants are integrated into a total spectrum of involvement.

4. Potential Application of Findings

The procedures employed in San Antonio by the ASAP over its 5 years of operation provide valuable insight into actions required by another site attempting to initiate a locally funded ASAP concept.

- The problems associated with the adjudication of drinking-driving cases arise from many sources and at all stages, but three may be said to predominate. First, the lower courts lack the resources and knowledge and procedures to develop and maintain effective systems spontaneously. Second, the population of drinking drivers is extremely large, and it contains many people addicted to a socially approved substance. Third, drinking-driving cases involve more than one agency and more than one branch of government, and systems designed to handle them encounter all the social problems of maintaining cooperation between the legislative, executive, and judicial branches.
- ASAP spent its efforts in two different but related directions. First was the attempt to bolster the existing court system to the point where it could cope satisfactorily with the traditional model of adjudication. Second and more important was the subsequent attempt to design and implement efficient court-based referral systems, in which the cooperation of all agents in the system made the identification and processing of drinking drivers to appropriate referral opportunities more important than the technical handling of the individual case. The system, which offered a reduction in charge from DWI in return for cooperation with a referral to education or rehabilitation, became as common as the more traditional systems of sentencing under conditions of probation. The concept of "earned charge reduction" became a basic element in the San Antonio ASAP.
- ASAP did not impose outside theory on the courts; it worked with them. ASAP had to be extremely flexible as court systems responded to outside and internal pressures and revealed their fragility at every moment of change. ASAP had to be flexible in accepting the achievement of one objective (e.g., increased referrals) even at the price of abandonment of another objective (e.g., records of conviction for DWI). The impact of the ASAP systems approach was evident, and they represent a major choice in criminal justice philosophy: to shift attention from trial to disposition system, from legal technicalities to case processing, from the individual judge to the concept of a court system, from an isolated sentence to a team interaction between all legal and public health agents.

ASAP was confronted with and solved problems of obtaining judicial respect and cooperation and streamlining court and data systems to accommodate vastly increased caseloads. ASAP demonstrated conclusively that the health/legal approach, which requires some cooperation between the courts and the enforcement agencies and extensive cooperation between the courts and the agencies of the alcoholism treatment system is entirely feasible and desirable to all parties attempting to solve the problem of the abusive drinking driver.

D. Summary of Problem Drinker Evaluation Findings

1. Initial Period (1971-1974)

During the initial 3-year program, Problem Drinker Evaluation consisted of two countermeasures: Presentence Investigation (PSI)—a psychometrist and clerical staff for categorization of referrals; and Presentence Investigation Control—professional services by the University of Texas Medical School at San Antonio for conduct of intensive individual psychosocial examinations of a selected sample.

The administrative evaluation was concerned with the degree of acceptance by the courts of PSI recommendations for rehabilitation and the validation of the test instruments used for the

PSI categorization. Acceptance by the County courts of PSI recommendations for the AIDE school was generally below performance estimates; only in one year did one court exceed the planned performance. On a combined basis, the three Courts accepted over 50 percent of PSI recommendations to AIDE. Generally, court acceptance of PSI recommendations to ATP was less than to AIDE, and overall acceptance of ATP was 41 percent. The PSI technique employed during 1972 and most of 1973 was the Mortimer-Filkins Evaluation. To validate the accuracy of this test instrument, a sample of persons receiving a PSI was referred to a medical professional from the University of Texas Medical School at San Antonio. The percent of complete agreement was 91 percent, partial agreement 8 percent, and disagreement on category (social, problem developing, problem) only 1 percent. A similar comparison was made for the Michigan Alcoholism Screening Test (MAST), which was used partially in late 1973 and almost exclusively in 1974. Based upon this comparison (67-percent agreement, 31-percent partial agreement), it was concluded that MAST was an acceptable, low-cost technique for an operational program, but did not have the same high degree of refinement required for conduct of research efforts.

The scientific evaluation of PSI was designed to develop differences in profile among four groups: PSI-Rehab Recommendation Accepted; PSI-Rehab Recommendation Not Accepted; No PSI, but Assigned Directly to Rehab by the Judge; and No PSI and No Rehab Assignment by the Court. This was considered to be important to an understanding of the adjudication process, particularly since over the 3 years of initial ASAP operation, the judges assigned more probationers to AIDE and ATP without a PSI than upon a PSI recommendation.

While the statistical analysis failed to indicate many significant differences, there were two discernible trends:

- The PSI-Rehab group, when compared to the PSI-No Rehab group, had more problem drinkers, more BAC refusals, more prior-DWI arrests, accidents, and non-DWI driving offenses, and were younger. This indicated a degree of judicial bias in rehabilitation referrals.
- The PSI-No Rehab group, when compared to the No PSI-No Rehab group, had a higher history of DWI arrests. Apparently, prior DWI was a major criteria used in the decisions on whether to refer probationers to PSI.

Subsequent deviant behavior was determined both for the DWI year and as a ratio of subsequent/prior behavior. Examination of the data developed several discernible patterns:

- Rehabilitation, with or without PSI, had better subsequent behavior in all measures than did the no-rehabilitation groups.
- PSI, without rehabilitation, may have some rehabilitative benefits for prevention of subsequent DWI. It did not appear to deter subsequent accidents or driving offenses.
- No rehabilitation and no PSI was the worst action for prevention of subsequent DWI. It also may adversely affect accident and traffic offense patterns.

2. Continuation Period

During the continuation period, two paths could be taken by an individual charged with DWI: prosecution through the County Courts-at-Law on the DWI charge, or a diversionary path

through which the individual was offered a reduction in charge to Public Intoxication provided he successfully completed an educational program (social drinkers) or a group therapy program (problem drinkers). Under either path, individuals were categorized as to the degree of their drinking problem at the Problem Drinker Evaluation Center operated by ASAP, and a recommendation was made to the judge or to the District Attorney. Three basic rehabilitation modalities were available: an educational school (Alcohol Instruction and Driver Education) operated for ASAP by the Greater San Antonio Safety Council; a rehabilitation treatment program (Alcohol Treatment Program) operated by Bexar County Mental Health-Mental Retardation; and Power Motivation Training operated for ASAP by a group of counselors certified in that treatment technique. The Bexar County Adult Probation and Rehabilitation office exercised probationary authority over DWI's placed on probation, but that office did not officially cooperate with ASAP.

During the 12 months between April 1975 and March 1976, individuals diagnosed at the Problem Drinker Evaluation Center were randomly assigned to treatment--no treatment groups appropriate to their drinking problem. Four of the five County Courts-at-Law accepted this random assignment procedure, as did the District Attorney for the diversionary path. However, all of these key officials in the adjudication process reserved the right to make any case disposition they felt was in the best interests of the individual or the community. The participating courts agreed in early 1975 to limit their exercise of judicial discretion in rejecting the PDE-recommended conditions of probation to not more than 10 percent.

When the DWI probation applicant reported to ASAP for a problem drinker evaluation, he was given the Mortimer-Filkins (M-F) questionnaire and interview, and pertinent information was gathered regarding his background, DWI arrest, and prior criminal record. On the basis of this information, the DWI probation applicant was classified as a social drinker (SD), a problem-developing drinker (PDI), a mid-range problem drinker (PDII), or an alcoholic drinker (PDIII).

The County Court-at-Law judge decided at the probation hearing whether to accept the PDE-recommended condition(s) of probation for the applicant. If the recommendation was not accepted, at his discretion, the judge then exercised numerous options. These options included granting probation with AIDE, ATP, or some non-ASAP treatment as its condition; granting probation without any rehabilitative conditions; or denying the probation request, thereby making the DWI conviction final.

Activity by the Problem Drinker Evaluation Center increased three-fold over the earlier ASAP years, and judicial acceptances of PDEC recommendations almost doubled. This was positive evidence of the degree of faith by the judges and District Attorney in the value of the Center. Through 31 March 1976 when random recommendations were stopped, the participating County Courts (Nos. 1, 2, 3, 4) and the District Attorney continued to comply with 95 percent of ASAP recommendations as they had done in 1975. The rate of compliance in cases referred from the County Courts was 89.9 percent; for DA referrals, it was 98.5 percent. There continued to be reluctance on the part of the judges to assign problem drinkers to control groups. The judges rejected nearly 20 percent of such recommendations. The highest acceptance for control groups was 93.9 percent, while the lowest was 71.8 percent.

3. Catalytic Impacts

Over the 5 years of the San Antonio ASAP, Problem Driver Evaluation has become an integral part of the diagnosis-referral-rehabilitation systems developed to provide effective methods for the disposition of DWI cases. PDE has provided the courts with meaningful diagnostic information and recommendations on which to base appropriate rehabilitative treatment as a condition of

probation so that individual DWI offenders could receive assistance in dealing with existing or potential drinking problems; PDE has become part of an adjudication system which applies a health/legal approach to the problem of drinking-driving. The value of this approach, and PDE's part in it, is reflected by actions on the part of Bexar County whereby PDE has been established as part of the locally funded program for adjudication of DWI offenders.

4. Potential Application of Findings

Results of the 5-year San Antonio ASAP indicate that Problem Drinker Evaluation played an important roll in the diagnosis-referral-rehabilitation activities of the ASAP system. Among the findings which could be of greatest benefit to the initiation and operation of locally funded ASAP's were:

- In order to provide for appropriate rehabilitative treatment as a condition of probation, the Courts must be provided with information on the extent of the defendant's drinking problem. Problem Drinker Evaluation, therefore, is essential in providing an adjudication system which applies a health/legal approach to the problems of drinking-driving.
- The methods of evaluation, which included collecting information on the DWI offender's background, DWI arrest, and prior criminal record and administering the Mortimer-Filkins questionnaire and interview proved effective. The results and recommendations based upon the evaluation and provided to the Courts were well accepted during the last 2 years of the program.
- In San Antonio, three different approaches to problem-drinker evaluation were used and compared during the 5-year program: full psychological-psychiatric examination by medical personnel, the Mortimer-Filkins Evaluation (M-F), and the Michigan Alcoholism Screening Test (MAST). Based upon this comparison, it was concluded that MAST was an acceptable, low-cost technique for an operational program. Screening techniques using this approach can be successfully accomplished by personnel holding bachelor or master's degrees in sociology or related fields; however, evaluators must be personable enough to interact with court officers. Overall, personal interaction, not technical content of the evaluation, established the credibility of PDE within the judicial system.
- Due to lack of cooperation from the Adult Probation Office, PDE was established as an independent ASAP function outside the normal adjudication system. While PDE was ultimately successful and accepted by the Courts, integration of the diagnosis-referral-rehabilitation system may have been accomplished earlier and more easily if PDE could have functioned as part of the existing system. Immediate acceptance of the ASAP diagnosis-referral-rehabilitation concept by the local adjudication system should not be expected in any case.

As is the case with all countermeasures within the ASAP system, a great deal of information and guidance on the initiation and operation of Problem Drinker Evaluation activities is available from NHTSA and individual sites which have conducted a program. Ultimate success, however, depends on adapting these findings to meet local conditions and maintain public support.

E. Summary of Rehabilitation Findings

1. Initial Period (1971-1974)

This activity consisted of three countermeasures: **Alcohol Information and Driver Education**—a four-session group education course for social drinkers stressing the effects of alcohol and DWI prevention planning; the **Alcoholic Treatment Program**—an individually tailored treatment program for problem drinkers incorporating such modalities as group therapy, individual counseling, family counseling, and chemotherapy presented in 6- to 8-week treatment modules; and **Diagnosis and Level II**—in-depth psychosocial evaluation by the University of Texas Medical School psychiatrists, and experimental Level II group therapy and Power Motivation Training rehabilitation programs for problem-developing drinkers.

The AIDE school, which handled the preponderance of ASAP rehabilitation referrals, showed annual increases in its new enrollees and graduates. Because of their longer course of treatment, ATP completions lag new enrollees by about 1 year. Through 1974, 84 percent of the AIDE enrollees and 50 percent of the ATP enrollees had successfully completed these rehabilitation programs. The administrative evaluation of the rehabilitation countermeasures centered on the agreement between actual client referral and throughput against pre-set performance estimates. The annual AIDE enrollment and graduation levels regularly exceeded their performance estimates. The referral of new enrollees to ATP also exceeded the performance estimates. The level of psychosocial evaluations remained close to the performance estimates. Level II group therapy and PMT programs, which were experimental, both fell considerably below their intended level of activity.

The scientific evaluation of ASAP rehabilitation program effectiveness was accomplished by profile and recidivism analyses. The profile analysis presented and compared to the profiles of pertinent study groups of DWI probationers having some contact with the ASAP system. The major probationer rehabilitation programs were evaluated by developing and comparing the crash and driving violation rates of selected groups.

The key profile and recidivism analyses involved five primary treatment study groups and comparison study groups. Both the primary treatment and comparison groups consisted of DWI probationers. Each primary treatment group consisted of a client with a single NHTSA drinker classification who only attended the specified ASAP rehabilitation program. Each comparison group consisted of clients receiving presentence investigation who were not referred to any ASAP rehabilitation program.

The DWI recidivism analyses of the probationer study groups compared the recidivism rates of related groups. For each client in a given group, the number of months that he was considered to be a member of the group susceptible to a recidivist DWI arrest (from group entry through December 1974) and the number of SAPD arrests for DWI that he experienced during that period were computed. A recidivist DWI arrest was defined as a booked DWI arrest (BAC ≥ 0.10 percent, or refused) occurring during the client's exposure period. The group DWI recidivism rate was then calculated as the group's total number of recidivist arrests divided by the group's cumulative man-months of exposure.

Despite, or perhaps because of, the fact that there were no good characteristic profile matches between the primary treatment and comparison groups, none of the primary treatment groups had a substantially lower recidivism rate than its best-matched comparison group. There was no firm evidence of ASAP treatment effectiveness in reducing the DWI recidivism rate of ASAP clients.

The ASAP AlcoLearn program was a diversionary procedure through which DWI arrestees, selected by the District Attorney, received a reduced charge conviction (Public Intoxication) as the disposition of their DWI case in return for their attendance and graduation from the ASAP-AIDE school. AlcoLearn was originally intended only for social drinkers meeting two criteria: an arrest BAC below 0.15 percent, and no more than one prior alcohol-related arrest. However, AlcoLearn-reduced charge convictions were also frequently granted to arrestees who did not meet one or both of these criteria. The recidivism rates were determined for three study groups. There was no significant difference between the recidivism rates of the proper AlcoLearn group and its comparison group. Thus, there was no evidence of AlcoLearn effectiveness in deterring DWI recidivism. However, the higher recidivism rate of the improper AlcoLearn group was nearly significant. The admission of DWI arrestees with an arrest BAC above 0.15 percent or with more than one prior alcohol-related arrest into the AlcoLearn program did not appear to be advisable.

In 1976, four study groups of probationer clients from 1972 to 1974, two treatment groups, and two comparison groups were selected for further analysis. For these four groups an additional year's recidivism data (1975) were introduced. DWI recidivism rates were calculated for each of the four study groups, and were compared against the recidivism rates of their comparison groups. The 0.0045 monthly recidivism rate of the AIDE treatment group was actually slightly higher than the 0.0037 recidivism rate of its comparison group. The monthly recidivism rates of both the ATP treatment group and its comparison group are 0.0152. Thus, a recidivism rate comparison with well-matched comparison groups provided no evidence of ASAP treatment effectiveness.

2. Continuation Period (1975-1976)

Rehabilitation activities for the continuation period were implemented in five areas: diagnosis of degree of drinker problem and random assignment to appropriate treatment modalities or control groups by the Problem Drinker Evaluation Center; conduct of the Alcohol Instruction and Driver Education School for social drinkers by the Greater San Antonio Safety Council; conduct of multi-faceted treatment programs for problem drinkers by the Alcohol Treatment Program, Bexar County Mental Health-Mental Retardation; conduct of Power Motivation Training for problem drinkers by counselors certified as instructors in that technique; and initial and followup Life Activities Inventories for problem drinkers randomly assigned into the Short-Term Rehabilitation Experiment.

Social drinkers (SD) were to be randomly assigned 50 percent to the Alcohol Instruction and Driver Education School and 50 percent to ASAP Control Group Level A, which received no treatment. Problem-Developing Drinkers (PDI) and Mid-Range Problem Drinkers (PDII) were screened to determine their potential for Power Motivation Training. If they met the education and language requirements, they were to be randomly assigned 33 percent to Power Motivation Training and the Alcohol Treatment Program, 33 percent to the Alcohol Treatment Program, and 33 percent to ASAP Control Group Level B, which received no treatment. If they did not meet the requirements for PMT, they were to be randomly assigned 50 percent to the Alcohol Treatment Program and 50 percent to ASAP Control Group Level B. All individuals processed into random assignment were asked to volunteer for the ASAP program. There were few refusals in San Antonio.

The research design called for equal numbers of clients to be recommended to treatment groups and to control groups. Examination of actual random recommendations revealed that the research design for STR recommendations was most nearly met. Recommendations to each segment of STR equalled close to 100. Random recommendations to AIDE school, however, far outdistanced recommendations to Level A, and random recommendations to ATP also exceeded

recommendations to Level B. The PDE Center staff did not consistently recommend every other client to a control group, and the imbalance in recommendations developed undetected. Further, the number of non-STR clients randomly assigned to ATP and its control group was so small that the scientific evaluation of ATP effectiveness was limited to the STR analysis.

The effectiveness of the AIDE School was determined by DWI recidivism analyses, which compared the recidivism rates of the Court- and District Attorney-assigned Groups against that of Control-Group "A." Within the Court and District Attorney Groups, comparison was made among the recidivism rates for Graduated-Initial Class, Graduated-Later Class, Disenrolled, and No-Show. For each client in a given group, the number of months that he was considered to be a member of the group susceptible to a recidivist DWI arrest (from group entry through December 1976) and the number of SAPD arrests for DWI that he experienced during that period were computed. A recidivist DWI arrest was defined as a booked DWI arrest ($BAC \geq 0.10$ percent, or refused) occurring during the client's exposure period. The group DWI recidivism rate was then calculated as the group's total number of recidivist arrests divided by the group's cumulative man-months of exposure. By utilizing the recidivism rate as the comparative variable in the recidivism analysis, the different lengths of exposure to recidivism for the various groups and various members in each group were taken into account.

The statistical analysis of recidivism exhibited by clients assigned to attend the Alcohol Information and Driver Education School as compared to a control group who did not attend the school showed no significant decrease in recidivism as a result of receiving the training. Further, the evaluation of clients who completed training versus those who did not showed no significant decrease in recidivism as a result of AIDE. Finally, while the District Attorney-assigned AIDE Group had more graduations, fewer disenrollments, and fewer no-shows than did the Court-assigned AIDE Group, it also exhibited a higher (though not statistically significant) rate of recidivism. From these facts it can be concluded that attendance at or completion of the AIDE school had little or no impact on the probability of DWI recidivism.

The scientific evaluation of the short-term rehabilitation experiment was performed with data supplied by the University of South Dakota on March 15, 1977. At that time a tape file of the STR data was supplied which contained records for 295 subjects. The demographic analyses and some of the analyses of recidivistic data were done at the University of South Dakota on February 1, 1977. At that time the STR abstract file contained about 7 cases which were later removed because of questions concerning group assignment codes.

The demographic analyses performed at the University of South Dakota were examined to determine which demographic variables, if any, significantly interacted with assignment to one of the three treatment groups—Control, ATP or PMT + ATP. There were significant interactions for only two of the demographic variables, drinker classification and age. Since these two demographic variables did interact with group assignment, they were both used as independent variables in the analyses.

The assignment of subjects to the treatment groups (Control, ATP, and ATP-PMT) was apparently not completely random. The proportions of subjects in each of the two drinker problem-level classifications (borderline and problem drinker) and the proportions of subjects in each age group were not the same for each of the treatment groups. Specifically, a disproportionately large number of young people were assigned to the PMT + ATP group. The ATP group received a disproportionately small number of young people. The Control group was assigned a disproportion-

ately large number of borderline problem drinkers, while the two treatment groups received a disproportionately large number of problem drinkers.

Although the lifestyle change analysis did indicate some statistically significant results, some of which were interpretable and perhaps even interesting, there was no indication whatsoever that the three treatment groups differed over time in any way. That is, none of the dependent variables analyzed showed any changes over time which were different for subjects in the three different treatment groups.

The analysis of recidivism by the University of South Dakota indicated no differences among the three treatment groups. The Project Evaluator's analysis of DWI recidivism indicated less recidivism for the rehabilitation groups than for the control group, but the difference was not statistically significant.

3. Catalytic Impact

While the scientific evaluation of the various rehabilitation programs has failed to provide a positive indication of effectiveness, these programs are considered by the adjudication system to be a viable alternative to the traditional sanctions imposed on DWI offenders. As witness to their acceptance, the Problem Drinker Evaluation Center and the AIDE and ATP rehabilitation programs have been included as a part of the DWI Control System operational in San Antonio since the conclusion of the ASAP effort.

4. Potential Application of Findings

The activities undertaken in problem drinker evaluation and rehabilitation over the 5-year San Antonio Alcohol Safety Action Project have provided considerable insight into which activities are essential or could have greatest impact on a locally funded ASAP. Among the findings which could be of greatest benefit are:

- The initiation and operation of a problem drinker evaluation center is essential to the development of the diagnosis-referral-rehabilitation system established under the ASAP concept. If the adjudication system is to be directed towards the health/legal approach to dealing with DWI's, it must be provided with appropriate background and level of drinking problem information upon which to make referral decisions. The San Antonio experience showed a high level of confidence in PDE once the service was established and accepted by the adjudication system.
- A treatment modality for social drinkers was nonexistent in San Antonio at the beginning of ASAP activities. The establishment of an AIDE school or similar rehabilitation measure for DWI offenders classified as social drinkers offers an opportunity to effect behavioral modification before the client's drinking becomes a more serious problem. However, care must be taken to avoid using this treatment as a convenient method of controlling the backlog of court cases by indiscriminately offering assignment to AIDE as a condition for reduced charges. Schools of this type are not appropriate for borderline or problem drinkers.
- Treatment programs for borderline and problem drinkers are normally available within the community. The task of ASAP is to identify the treatment programs available and develop a system of referral between these programs and the adjudica-

tion system. In San Antonio, ASAP efforts were readily accepted by the Alcohol Treatment Program; not only did ASAP serve as the change agent in developing the diagnosis-referral-rehabilitation system, but also acted as a source of clients for ATP.

- One of the first major efforts of an ASAP is, of course, to cause a significant increase in the detection and apprehension of DWI's. When planning an ASAP, care must be taken to ensure that the adjudication and rehabilitation countermeasures have the capacity to effectively handle the increase in caseloads resulting from enforcement activities. In the rehabilitation area, this means that available capacities must be determined and additional activities initiated to provide needed services. Conversely, the capabilities of the community to provide rehabilitative services should be considered when determining the level of DWI enforcement appropriate for the locally funded program.

During the 5 years that it has been sponsoring ASAP programs, the National Highway Traffic Safety Administration has collected considerable information on the types and effectiveness of rehabilitation programs used to deal with DWI offender/clients. It is recommended that local communities make maximum use of the information available in their efforts to develop an ASAP to meet local needs and capabilities.

F. Summary of PIE Findings

1. Initial Period (1971-1974)

The Public Information and Education Program was implemented by the staff of the Project Director, using materials developed both by NHTSA and its national contractor, and by a local subcontractor. The program focused attention on the hazards of the drinking-driver through three campaigns.

The **mass media campaign** made extensive use of all three media to achieve its objective to publicize the Alcohol Safety Action Project. Activity events were approximately as planned; however, all three media tended to decrease their coverage as ASAP became better recognized and lost its news appeal. The household survey indicated that mass media messages had reached almost 50 percent of the people of San Antonio by 1974.

The **citizen involvement campaign** made use of a wide variety of techniques to achieve its initial objective to develop support for the Alcohol Safety Action Project, particularly from influential citizens. This objective was later broadened to include a person-to-person campaign aimed at the "grass roots," and more extensive use was made of handouts, displays, and contacts with military and industrial organizations. Activity events were somewhat lower than planned for speaking engagements, contacts, and displays, but were exceeded for pamphlets, fliers, and posters. The household survey indicated that citizen involvement materials had reached almost 15 percent of the people of San Antonio by 1974.

The **driver and traffic safety enrichment campaign** made approaches to students, teachers, school district personnel, and state-level curriculum administrators to achieve its objective to function as a catalyst to expand factual information provided to students concerning the hazards of alcohol and driving. Activity events exceeded planned levels and were constrained only by the size of the staff available to make presentations.

The scientific evaluation of the public information and education effort was accomplished through analysis of data generated by four annual household surveys and four annual voluntary roadside surveys. The household survey was a stratified random sample of over 500 individuals who collectively matched socioeconomic patterns in San Antonio. The voluntary roadside survey was conducted at 32 high-accident risk locations within San Antonio, and had an annual intake of over 640 drivers.

Analysis of household survey data led to four conclusions: PIE was effective in increasing the general public's awareness of the drinking-driver problem; PIE increased recognition of ASAP and knowledge of the effects of alcohol; PIE was fairly effective in increasing levels of awareness and recognition of ASAP in Anglo, Latin, and Black ethnic groups, but met with less success in the Black population for increased levels of knowledge; and PIE was equally effective in reaching both youth and adult populations.

Data from the roadside survey were used to correlate BAC levels with recognition of the ASAP effort and knowledge concerning alcohol impairment and driving. Analysis of the data indicated that drinking drivers had not been effectively reached, nor was there any significant impact on their knowledge levels.

2. Continuation Period (1975-1976)

Public information and education activities were implemented in four areas: a national mass media effort aimed at the general public; a local multi-media "Know Your Limit" campaign directed toward the drinking public; local "Fear of Arrest" campaigns directed toward the drunk driver; and an educational experiment for young, beginning drivers. There were over 80,000 public information and education events in 1975 and 1976.

The national media campaign, which had as its theme "Friends Don't Let Friends Drive Drunk," had little impact on the general public in the San Antonio area. Unquestionably, the major reason for its failure to make a significant impact was the total reliance placed on public service messages. A companion reason is the "macho" attitude which prevails among most of the population in San Antonio. This attitude is not at all conducive to successful impact of the theme used for the national media campaign.

The "Know Your Limit" campaign, which was used for 5 years, continued to make slow, but steady progress. In 1975, of the surveyed drivers who stated that they drink alcoholic beverages, 49 percent knew their limit or understated the number of drinks they could consume before becoming legally drunk. In 1976, this percentage was slightly over 50 percent.

The local "Fear of Arrest" campaign, designed and implemented in 1975 by a local advertising agency, was the most successful public information campaign in the 5 years of ASAP in San Antonio. In less than 6 months of exposure, it had reached about one-third of the impaired ($\geq 0.05\%$ BAC) drivers tested in the roadside surveys. Further, it was calculated from these data that over 100,000 impaired drivers were correctly influenced not to drive because of the "Fear of Arrest" advertising. Even if these calculations, which rest on somewhat tenuous assumptions, were in error by a factor of 10 or even 100, it was clear that the campaign was immensely successful.

The 1976 local "Fear of Arrest" campaign was intended to increase the perception of the selective enforcement forces saturating the expressways by drinking drivers who frequently used the expressway system at night. Data developed in two roadside surveys, October and December 1976,

indicated that sober drivers were highly aware of increased patrol activity, while perception of these activities among impaired drivers was much lower. Driver awareness was due almost entirely to direct observation of patrol units; the limited media campaign, at best, served only to reinforce earlier direct observation.

3. Catalytic Impact

A quasi-scientific analysis conducted in 1974 indicated that the existing driver-education curriculum did impart alcohol hazard knowledge, but that ASAP materials and presentations were effective supplements. At the request of the Texas Education Agency, a 3-hour alcohol unit was implemented in the driver's education classes of the Northside Independent School District during 1975. This was approximately three times as much time as is normally spent on that subject in driver education classwork. The Texas Education Agency had indicated that, provided the pilot curriculum was found effective, it would give consideration to expanding its use throughout the entire Texas school system.

The degree to which this ASAP curriculum increased knowledge on the effects of drinking while driving was determined by a 20-question test using a pretest-posttest control group design. There was a statistically significant improvement in knowledge levels for the ASAP school district. The degree to which this ASAP curriculum deterred subsequent DWI, moving traffic violations, and accidents was determined by tracking the driving records of both the ASAP curriculum and control group for the first year of their experience as new drivers. Classical statistical tests indicated no difference between the two groups. Nevertheless, the Texas Education Agency plans to develop a curriculum embodying alcohol instruction and to implement the program on a state-wide basis.

4. Potential Application of Findings

The activities and campaigns undertaken in public information and education over the 5-year San Antonio Alcohol Safety Action Project provided considerable insight into those areas where PIE actions were essential or could have the greatest impact. Among the findings which could be of greatest benefit to the initiation and operation of locally funded ASAPs were:

- Early and continued support of ASAP by locally influential people and groups is essential to the success of the program. Recommended PIE activities to maintain this support include conducting seminars, providing speakers and materials for presentations to various organizations, and constant personal attention by the Project Director and his staff.
- The success of public information campaigns is greatly enhanced if local agencies are involved in the promotional activities. Identification and detection of local agencies to conduct these campaigns are therefore recommended.
- "Know Your Limit" and "Fear of Arrest" campaigns are successful during the period they are actively pursued; however, the impact of these efforts are quickly lost upon termination of promotional activities. It is therefore recommended that these campaigns be designed and conducted at a level which can be sustained over a long period of time.

- Expanded alcohol safety units in driver education courses significantly improved young beginning driver's knowledge of the hazards of drinking-driving. It is recommended that efforts be taken to improve and supplement driver education programs in the local area with ASAP materials.

A large amount of PIE material has been developed by the various federally funded ASAPs and by NHTSA and is available for local use. It is recommended that local ASAPs become familiar with the information available at the national level and make use of these materials to the maximum extent possible. However, experience in San Antonio has shown that the greatest success was achieved with those campaigns which were tailored for local conditions or modified and amended to reflect local support.

G. ASAP Elements Continued Beyond Project Termination

1. Project Administration

Project administration, including a small administrative staff and the Evaluation Subcontractor, will continue to function under Federal funding until June 1977. At that time, it is planned to shift coordinative responsibility for ASAP activities to the Traffic Safety Coordinating Committee of the City of San Antonio and the County of Bexar, with day-to-day activities handled by the San Antonio Department of Traffic and Transportation.

The Evaluation Subcontractor will continue to collect and evaluate Level I and Level II data and to provide the results of these activities to NHTSA through 1978. Funding of these activities will be provided by cost underruns.

2. Enforcement Elements

Selective enforcement of the expressways will be continued under funding provided to the City of San Antonio by the State of Texas. The Expressway Enforcement Patrol force will be comprised of ten patrolmen, one sergeant, and one detective-investigator, operating all seven days of the week from 2315 to 0315 on five segments of the expressway system.

3. Judicial Elements

The District Attorney and County Courts-at-Law continue to make use of the Problem Drinker Evaluation Center and the rehabilitation modalities recommended by ASAP. Additional assistant District Attorneys and judges' assistants were originally ASAP-funded, but have been locally-funded for several years.

4. PDEC/Probation Elements

The Problem Drinker Evaluation Center will operate through June 1977 under Federal funding; thereafter, the Center will be funded by the County of Bexar, at least through the end of 1977. Because of the high degree of interest by the District Attorney and the County Courts-at-Law, it is anticipated that this activity will become a permanent and integral part of the criminal justice system in the County.

5. Rehabilitative Elements

The AIDE School, which has been financially self-sustaining through tuition payments, will continue to operate in that mode through 1977. The Alcohol Treatment Program, which was never funded by highway safety money, will continue to operate under funding by DHEW and local contributions. Tentative plans have been made by ATP to expand the ASAP criminal-justice-health care delivery concept (PDEC-AIDE-ATP) to the eleven-county Alamo Area Council of Governments jurisdiction.

6. Public Information and Education Elements

Public information contacts with local schools and groups will be continued by the Accident Prevention Bureau of the San Antonio Police Department. The Texas Education Agency is presently preparing a 4-hour curriculum for inclusion in its Driver Education program which will emphasize the effects of alcohol on highway safety; it is their intention to implement this program on a state-wide basis.

