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16. Abstract

A Program of Responsible Alcohol Service was developed to enable servers and managers in establishments selling alcoholic beverages to exercise responsibility in their service of alcohol in order to prevent injury to and by intoxicated patrons. The Program, which requires three hours on the part of servers and six hours on the part of managers, deals with the need for responsible alcohol service, preventing intoxication, identifying signs of intoxication, and preventing driving by intoxicated patrons.

The Program was field-tested on 245 servers and managers in Louisiana and Michigan. It produced significant improvement in knowledge, attitudes, and self-reported serving practices at both sites. Improvement in reported policy, as well as increases in observed intervention in patron drinking, occurred only in Michigan. It was concluded that intervention in the service of alcohol to intoxicated patrons will occur only where there is strong management support.

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PREFACE

This report describes the development and evaluation of a program designed to encourage and enable those who are involved in the service of alcoholic beverages to exercise responsibility in assuring that patrons do not leave their establishments in an intoxicated condition. An Instructor Guide for the program makes up Volume II of the report. The work described was carried out by Public Services Research (PSR) under contract to the National Highway Traffic Safety Administration (Contract No. DTNH22-84-C-057170).

The author is grateful to the following individuals for their assistance during various phases of the project: Mr. William Coolidge and Ms. Cathy Nagy of Sheraton Corporation, who helped during development and pilot testing of the program; Ms. Laura Flannery and Mr. Philip Bordelon of the Lafayette (Louisiana) Alcohol Traffic Action Campaign; and Mr. John Hittler of the Washtenaw County Sheriff's Office who helped in making arrangements for the field test; Messrs. Tom Gannon, Richard Stapleton, Ken Brosamer, Neal John Vincent, T.J. Hotard, Wayne Harper, and Donald H. Brewton, who played the roles of intoxicated patrons and observed the responses of servers; and the 245 servers and managers in the 32 establishments that participated in the program.

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TECHNICAL SUMMARY

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Background

Studies by Wolfe (1975), Damkot (1979), Palmer (1986), and Ontario (1980) found that bars and restaurants were among the most common sources of drivers having high blood alcohol levels. In order to reduce injury and illness resulting from intoxication, most jurisdictions make it illegal to serve alcohol to minors or already intoxicated patrons. In a large number of States, statutory and common law permit parties injured by drunken drivers to recover damages not only from the intoxicated driver, but those who served them.

Concern over law suits has led to efforts to educate servers, managers, and owners in alcohol service policies and practices that will reduce their liability. The programs have ranged from brief "awareness" seminars to training programs of as much as two days. Topics include alcohol and its effects, the drinking-driving problem, laws and regulations covering the service of alcohol, signs of alcohol impairment, ways of controlling the consumption of alcohol, and handling intoxicated patrons.

Because of their relative novelty, server education programs have not been extensively evaluated. Salz (1987) administered and evaluated a program for Navy personnel and found a significant drop in overall rate of alcohol consumption and in the consumption of over-size drinks following administration of a program to server personnel. Geller and Russ (1986) offered a program in two licensed establishments and found slight increases in efforts by servers to slow down the rate of consumption and in the amount of alcohol actually served to staff members posing as patrons.

The goal of the project described in this report was to assess the effectiveness of a large-scale server training program in leading to more responsible service of alcohol.

Development of Server Education Programs

A program of Responsible Alcohol Service was designed to encourage and enable servers, managers, and owners of licensed establishments to be more responsible in their service of alcohol. The program was designed in a modular

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form to permit the different needs of the categories of users--servers, managers, and owners to be met. To foster widespread use of the program, it made extensive use of written and audiovisual materials and left the primary role of the instructor as being that of moderating discussion.

The following seven modules comprise the program of Responsible Alcohol Service:

Module 1 Awareness - An introduction to responsible alcohol service (30 min.)

Module 2 Needs - The problems giving rise to the need for more responsible alcohol service (50 min.)

Module 3 Prevention - What servers and managers can do to prevent patrons from becoming intoxicated (50 min.)

Module 4 Intervention - The intervention by servers and managers when customers have become intoxicated (50 min.)

Module 5 Practice - Role play and discussion of various manager intervention situations (1-1/2 hours)

Module 6 Policy - The formulation of policy to foster responsible alcohol service (1-1/2 hours)

Module 7 Training - Preparation for administering the instructional program (30 min.)

Evaluation Methodology

The Program of Responsible Alcohol Service was administered on a community-wide basis in two cities of approximately equal size, one in Louisiana and one in Michigan. A total of 190 servers and 55 managers, representing 32 establishments, participated in the program. In Louisiana, this represented participation of 93% of the managers and 71% of the servers in the participating establishments. In Michigan, the rates were 76% and 69%, respectively.

At each site, control groups consisted of 34 establishments, including (1) ten establishments broadly representing a cross-section of establishments and held aside as a designated control group, and (2) some 24 establishments that were invited to participate and did not do so and served as the default control group.

At each location, four members of the project staff visited both the participating (treatment) and non-participating (control) establishments four times each prior to and following administration of the server education program. During each visit, the individuals manifested signs of intoxication and observed the servers' response. Paper-pencil measures of knowledge, opinion, and self-reported behavior were also administered.

Observed Intervention

Observed level of intervention in response to feigned intoxication was low across all sites. The great majority of the visits resulted in no intervention. However, in Michigan, the level of intervention among those trained (treatment) rose while the control group showed no change in intervention level. In Louisiana, the results were not so favorable. While the level of intervention

went up at the treatment sites, it went up even more in the control sites. An analysis of covariance revealed a significant three-way GROUP x TIME x SITE interaction; F=4.221, p<.05, meaning that there was a significant increase in intervention within Michigan, but not in Lousiana. Increases in intervention were greatest in establishments catering to more affluent clientele and where business volume was lowest.

Paper-Pencil Measures

Significant overall knowledge gains were obtained across the two sites (F=130.9; p<.01). The gains were also separately significant both in Louisiana (t=3.71; p<.01) and Michigan (t=7.24; p<.01). The knowledge gain in Michigan was half again as large as that evidenced in Louisiana. This difference is significant as shown by a significant SITE x TIME interaction (F=5.96; p=<.05). The greater knowledge gain evidenced by the Michigan participants may have contributed to the differences in the apparent effect of the program upon server intervention across the two sites.

The results also showed a significant shift in the direction of more favorable opinions toward responsible alcohol service (F=41.8; p=<.01). The changes were significant in both Louisiana (t=7.31; p<.01) and Michigan (t=7.88; p<.01). Opinions in Michigan were significantly more favorable than those in Louisiana both before and after the program (F=5.27; p<.05). However, unlike knowledge gains, opinion shifts did not differ from one site to the other, but were relatively constant across sites. Therefore, there is no evidence that shifts in opinion contributed to the greater intervention change in Michigan vs Louisiana.

Changes toward more responsible serving practices were reported by servers in both sites. Correlated one-tail t-tests showed the changes to be significant in both Louisiana (t=5.76; p<.01) and Michigan (t=4.09; p=<.01). It is noteworthy that the improvement reported by Michigan servers was slightly greater than that of Louisiana servers. However, the differences between the two sites were not statistically significant.

Policy changes followed changes in server practices to the extent that greater changes were reported by the Michigan participants. However, in the case of management policies, the changes in Michigan, as assessed by a one-tailed correlated t-test, were statistically significant (t=2.53; p=.04), while those reported by the Louisiana managers were not significant (t=1.32; p=.20).

Conclusions

The following conclusions may be offered on the basis of the information gained in the present study:

1. Server education programs are capable of improving knowledge of, and attitudes toward, responsible alcohol service on the part of servers and managers.

2. Server education programs can bring about small but significant increases in intervention. However, the likelihood and magnitude of changes in intervention depend upon situational variables.

3. Changes in management policy toward alcohol service appear to be small in magnitude and limited in the conditions under which they occurred.

4. The likelihood of intervention with intoxicated patrons is greatest in establishments catering to a relatively affluent, adult clientele and under relatively low levels of business volume.

INTRODUCTION

In 1985, approximately 41% of drivers killed in automobile crashes were intoxicated (FARS, 1985). This figure represents a 9% decrease from the 50% recorded in 1950. Much of the decline is attributed to increased national awareness of the drunk-driving problem and increased efforts to curb drinking and driving through legislation, enforcement, education, and treatment.

SERVER INTERVENTION

For the most part, efforts to curb drinking and driving have focused upon the drinking drivers themselves. In recent years, however, the target of anti drunk-driving efforts has been expanded beyond drunk drivers to the people who serve them alcohol, including bartenders, waiters and waitresses, as well as managers and owners of the bars and restaurants in which they work.

Data gathered from roadside surveys points to bars and restaurants as the place where a major share of the drinking by intoxicated drivers occurs. Palmer (1986) found that, of drivers with positive blood alcohols, the highest concentrations were obtained from those whose most recent stop had been bars and restaurants. The blood alcohol concentration of this group was four times the population average. While the Province of Ontario (1980) found only 15% of intoxicated drivers coming from bars and taverns, such drivers showed a rate of intoxication (17.3%) that was twice that of any other group and almost three times that of the population average.

In a roadside survey conducted in Vermont, Damkot (1979) found that almost half the drivers exceeding the legal limits of intoxication had come from bars or restaurants, while Wolfe (1975) found over half of drivers who had either come from or were going to a drinking establishment had measureable amounts of alcohol in their systems.

SERVER CONTROL EFFORTS

From roadside surveys, it is obvious that drivers coming from places where alcohol is served are overrepresented among alcohol-impaired and intoxicated drivers. Efforts have been undertaken to reduce the threat represented by drivers who become intoxicated at bars and restaurants through:

Law--The passage, enforcement, and adjudication of laws involving the servers of alcohol.

Education--Instructing servers in the responsible service of alcohol.

Regulation

Efforts to control the service of alcohol through the law involves two types of laws: liquor control and dram shop.

Liquor Control Laws

Almost every establishment engaged in the service of alcohol is subject to State laws or local ordinances regulating the service of alcohol. Such laws make it illegal to serve alcohol to an under-age or an intoxicated patron. While these laws have existed for a long time, they've only recently been enforced as a means of overcoming the drinking-driving problem. Unfortunately, enforcement efforts are largely confined to the service of alcohol to minors. Citing an establishment for serving alcohol to an intoxicated patron is rare.

Most liquor control laws only hold servers of alcohol responsible for withholding service to patrons who are visibly intoxicated. One obstacle to enforcement of laws barring service to intoxicated patrons is the difficulty involved in established enforceable standards of what constitutes a visibly intoxicated patron. It is more difficult to prove in a court of law that a patron was visibly intoxicated than to prove that a patron is under the legal drinking age. State liquor control laws, therefore, have not proven to be an effective way of preventing drivers from becoming intoxicated at bars and restaurants.

Dram Shop Laws

In some 35 States, individuals who are injured by a driver who was illegally served alcohol can sue the server of alcohol for recovery of damages. Twenty States have statutes that specifically provide for recovery of damages. In 15 other States, precedent for recovery of damages has been established in State common law. Although enacted to permit innocent parties a means of recovery for damages, they are expected to prevent the service of alcohol to intoxicated and under-age patrons.

While dram shop laws have been on the books for a long time--over a century, in some States--they've only recently been invoked on a large-scale basis against servers of alcohol. A recent rise in lawsuits, along with a few but well-publicized large judgments, appear to have aroused the concern of the hospitality industry. While there's no way of knowing what effect concern over dram shop suits has had upon the actual service of alcohol, the trade press has been filled with information advising the constitutency on ways of controlling the flow of alcohol. Many establishments, including several large chains and franchises, have instituted policies limiting the alcoholic content of drinks, imposing penalties on servers who violate the law, providing transportation to intoxicated patrons, and the like.

Education

One result of the industry concern over dram shop suits has been the initiation of efforts to educate servers, managers, and owners in alcohol service policies and practices that will reduce their liability. The programs have ranged from brief "awareness" seminars to training programs of as much as two days. Topics include alcohol and its effects, the drinking-driving problem, laws and regulations covering the service of alcohol, signs of alcohol impairment, ways of controlling the consumption of

alcohol, and handling intoxicated patrons. Two of the best manager programs are "Techniques of Alcohol Management" (TAMS) developed by the Michigan Licensed Beverage Association in cooperation with the Michigan Highway Safety Office, and "Training for Intervention Procedures by Servers of Alcohol" (TIPS), developed by the Health Education Foundation.

Other programs include: the "Responsible Beverage Service" program of Intermission Ltd.; the "Bartender Alcohol Awareness Program" (BAAP) developed by the Madison (Wisconsin) Area Technical College. Programs have also been developed and administered by the Connecticut Cafe and Restaurant Liquor Council, the U.S. Navy Recreational Services Department, the Virginia Restaurant Association, the New York Restaurant Association, the California Department of Alcoholic Beverage Control, and a number of other State, county, and local programs. (Programs developed and given by the associations representing arena concession operators and off-sale establishments are outside the scope of the project described in this report).

The level of participation in education programs by servers of alcohol has not been encouraging. According to Cozzens, Mackintosh, and Ostrove (1983), "In part, the licensees seemed to resist efforts to get them involved because of the perception of self-interest -- feared loss of revenues and profits." To overcome the lack of participation in educational programs, several jurisdictions have made successful completion of education programs mandatory for servers of alcohol. One of the first was the City of Madison, Wisconsin, which in 1981 imposed the requirement on all holders of liquor licenses, on- and off-sale, as well as all servers of alcohol. In 1985, the State of Oregon passed a law requiring all servers of alcohol renewing their work permits after January 1987 to complete an approved program. In 1986, Utah passed a law requiring all permit holders to complete an approved program by June of 1987.

Prior Research

Because of their relative novelty, server education programs have not been extensively evaluated. Salz (1987) administered and evaluated a program for Navy personnel and found a significant drop in overall rate of alcohol consumption and in the consumption of over-size drinks following administration of a program to server personnel. Geller and Russ (1986) offered a program in two licensed establishments and found slight increases in efforts by servers to slow down the rate of consumption and in the amount of alcohol actually served to staff members posing as patrons.

While the evaluation of the two programs produced positive results, both efforts involved limited numbers of establishments and somewhat atypical situations. And, neither program assessed the effectiveness of server education in reducing the number of drivers who become intoxicated. The issue of intoxication is of critical importance on two counts: (1) it is of importance to injury prevention in that the likelihood of alcohol-involved automobile crashes tends to rise sharply as the .08-.10 BAC level, the legal definition of intoxication, is reached, and (2) it is important to licensed establishments since it is primarily service of alcohol to intoxicated patrons that renders them liable for legal action.

Evidence that server education programs are effective in leading to more responsible service of alcohol could help lead to an increase in both number of establishments that would participate in server programs voluntarily and the number of jurisdictions mandating participation. On the other hand, conclusive evidence that they are not effective would point to the need for either alternative or additional steps to the improvement of serving practices and policies.

The Geller and Russ study is certainly encouraging in indicating that servers will voluntarily participate in education programs and that such programs can be effective in leading to more responsible alcohol service. It is limited in that (1) it was confined to the employees of two establishments and one location, (2) the six-hour program given was more intensive than what many servers are likely to volunteer for or many governments require, (3) the program was administered by specialists in server intervention, who may not be representative of those likely to teach local programs, and (4) intervention to the point of terminating service was not assessed.

PROJECT OBJECTIVE

The goal of the project described in this report was to assess the effectiveness of server training in leading to more responsible service of alcohol. Specific objectives were:

- To define the requirements of potentially effective server education programs.
- To prepare and pilot test a server education program meeting the specified requirements.
- To assess the effectiveness of a server education program in modifying the behavior of servers.

The attainment of each specific objective constituted a phase of the project. The first phase, "Program Definition", involved identifying an appropriate set of instructional objectives and designing an instructional program to fulfill those objectives.

The second phase, "Program Development and Test", involved development of a preliminary program, a test of the program through its administration to servers and managers in hotels, bars, and restaurants, and revision of the program.

The final phase, "Program Evaluation", involved administration of the program in two different localities and assessment of the program's effectiveness in modifying the behavior of servers and managers.

Each of these phases is described in a separate section of the report. The closing section of the report offers conclusions concerning the effectiveness of server education and recommendations as to efforts that must be undertaken, including server education, to improve the responsibility of alcohol service.

PROGRAM DEFINITION

This section of the report will describe the definition of requirements for an Alcohol Service program for servers and managers in establishments engaged in the on-premises service of alcohol.

SOURCES OF INFORMATION

Three major sources of information were applied to the development of a program of responsible alcohol service:

- o Design study
- o Literature review
- o Existing programs

Design Study

Prior to the start of the effort described in this report, National Capital Systems, Inc. (NCSI) undertook a study of intervention by various "intermediaries" as a means of deterring drunk driving (Cozzens, Mackintosh, and Ostrove, 1983). This program identified potential targets for drunk driving intervention programs. One such target was patrons of bars and restaurants. The study also provided a design for a 2-3 hour server education program, consisting of an introduction, a video presentation, a discussion and question period, role-playing exercises, and a brief conclusion. Each section of the program was outlined and the materials needed to support the program described in general terms.

The design provided by NCSI, along with the discussion of its rationale, provided a very useful resource in development of the server education program described in this report. It was not, of course, sufficiently detailed to serve as the only source of information. Nor was it completely up to date since the authors of the report were not in a position to take advantage of experience gained in actual administration of server education programs. Nevertheless, results of the NCSI study gave the project a head start in developing a server education program.

Literature Review

At the beginning of the project, the scientific and technical literature were rather barren of references dealing directly with server education. However, there was available a considerable volume of material in subjects bearing upon various aspects of server education. Included were:

- o The results of law suits and other court actions involving dram shop and liquor control laws

- o State laws and regulations covering the sale of alcohol and driving while intoxicated.
- o Surveys of servers, managers, and owners attitudes toward various aspects of responsible alcohol service.
- o Common drinking patterns (who, where, when, etc.).
- o Patron behavior in relation to various social and environmental factors.
- o Effects of alcohol upon driving behavior.

The review of the literature was facilitated by abstract searches conducted through computerized abstract services of the National Institutes of Health (MEDLARS), the Transportation Research Board (TRIS), and the American Psychological Association (PASAR).

Existing Programs

Development of the program of Responsible Alcohol Service was greatly benefited by access to materials prepared for a number of existing server education programs including most of those listed earlier. The organizations responsible for developing and administering these programs were most accommodating in making available lesson plans, handouts, videos and other items. In addition, arrangements were made for the project staff to sit in on administration of the TAMS and TIPS programs. By reviewing program materials and observing administration of the programs, the project staff not only gained access to instructional content and methods but also valuable insight into the strengths of each program.

INSTRUCTIONAL OBJECTIVES

From a review of the materials described above, the project staff compiled a comprehensive list of all of the specific functions that servers have been called upon to carry out. From these lists were prepared sets of objectives for performance, knowledge and attitude. Different instructional objectives were developed for servers, managers and owners in order to accommodate their differing functions, levels of experience and responsibility.

The staff was assisted in the development of instructional objectives by a panel of representatives from the highway safety community and the hospitality industry. This panel surveyed the entire behaviors and knowledges developed from the literature by the project staff, assisted in formulating a set of objectives, and advised on the division of objectives among servers, managers, and owners. The objectives appear in Appendix A.

DESIGN CONSIDERATIONS

From the literature, as well as from discussions with representatives of the hospitality industry, a number of important design considerations were identified. These considerations dealt with:

- o Separate courses for servers, managers, and owners.
- o User administration.
- o Audiovisual materials.
- o Role playing.

Separate Courses

It was recognized early that there needed to be separate courses for servers, managers and owners, based upon their differing needs.

> Owners--Need only to be convinced of the need for an educational program and given a brief overview of what they were being asked to send their employees to.
>
> Servers--Need to be both able and willing to intervene as necessary to keep patrons from becoming impaired by alcohol, and to keep them from injuring themselves and others once they become impaired.
>
> Managers--Have the same needs as servers, plus the ability to set policy, supervise, and train servers, as well as handle the more difficult forms of intervention.

Having a series of courses improves the marketability of the program by tailoring the investment to the need. Few owners are willing to spare several hours learning about details of responsible alcohol service. Nor are many willing to invest great amounts of time and expense in training an entire staff of servers who tend to change jobs frequently. They are more likely to make that investment in managers. Allowing each category of participants to take only as much instruction as they need will tend to enhance the marketability of a program.

User Administration

Discussions with representatives of the hospitality industry suggested that a useful program would be one that could be administered by people within the industry itself, rather than through schools or outside agencies. Several of the programs already described were available through outside organizations. While their programs were certainly acceptable, and the cost of taking them modest, there still seems to be a need for a program that did not require out-of-pocket expenses, nor having to meet someone else's schedule of administration. A program that individual establishments or associations of establishments could secure and use by themselves would fill an apparent need.

Audiovisual Materials

A program that is self-administered would lean heavily toward use of audiovisual (AV) presentations as the primary vehicle for transmitting information. AV presentations are well-suited to user-administered program in that they can ease the instructional burden on the instructor. Not all instuctors will be highly qualified lecturers. The more information that AV presentations can present, the less the instructor will be required to do. Moreover, an audiovisual presentation can present information vividly, through vignettes and real life situations that the audience can directly relate to.

Role Playing

Role playing can be used to help students develop skill and confidence in carrying out a certain behavior, such as intervening with intoxicated patrons. Most of the server education programs involved extensive role playing of such situations. Of course, many servers and managers have had a lot of experience in intervening in the drinking of patrons. For such participants, role playing can be used as a device to help managers improve their strategies for intervention. In such an application, more time must be spent on the discussion that follows each role-playing exercise than on the role-playing exercise itself.

PROGRAM DEVELOPMENT AND TEST

A server education program was developed to meet the specified instructional objectives, and follow the specified guidelines. This section will describe the program that was developed, the "Responsible Alcohol Service Program," the methods used to test it, and the results of the test program.

RESPONSIBLE ALCOHOL SERVICE PROGRAM

A modularized program was employed in order to meet the differing needs of servers, managers, and owners. The program of Responsible Alcohol Service itself consisted of six modules. An additional Training module was added for preparing instructors to administer the program.

Program Outline

The following seven modules comprise the program of Responsible Alcohol Service:

Module 1 Awareness - An introduction to responsible alcohol service (30 minutes)

Module 2 Needs - The problems giving rise to the need for more responsible alcohol service (50 minutes)

Module 3 Prevention - What servers and managers can do to prevent patrons from becoming intoxicated (50 minutes)

Module 4 Intervention - The intervention by servers and managers when customers have become intoxicated (50 minutes)

Module 5 Practice - Role play and discussion of various manager intervention situations (1-1/2 hours)

Module 6 Policy - The formulation of policy to foster responsible alcohol service (1-1/2 hours)

Module 7 Training - Preparation for administering the instructional program (30 minutes)

The seven modules can be combined to form separate programs for owners, servers, managers, and instructors as follows:

Owners:

Module 1 Awareness (30 minutes)

Total Program: 30 minutes

Servers:

Module 1 Awareness (30 minutes)
Module 2 Needs (50 minutes)
Module 3 Prevention (50 minutes)
Module 4 Intervention (50 minutes)

Total Program: 3 hours

Managers:

Server program (3 hours)
Module 5 Practice (1 and 1/2 hours)
Module 6 Policy (1 and 1/2 hours)

Total Program: 6 hours

Instructors:

Server/Manager Program (6 hours)
Module 7 Training (1 hour)

Total Program: 7 hours

Module 1--Awareness

The "Awareness" module is intended to help make owners, managers, and servers aware of the need for responsible alcohol service. It consists of a 10-minute audiovisual presentation followed by a 20-minute discussion.

AV Presentation

The "Responsible Alcohol Service" presentation is designed to provide an overview of the drinking-driving problem and the ways that commercial establishments can help alleviate it. It is intended to (1) arouse interest in the program on the part of owners in order that they will permit their servers and managers to attend, and (2) provide an introduction to the program for servers and managers.

In this presentation, the participants are introduced to "Stan," the manager, the character who serves as the moderator through most of the other presentations, and to his bar, the setting for all subsequent action. The audience is also introduced to the concept of server liability and its implications in the daily operation of a commercial establishment. The following issues are addressed:

The magnitude of the drinking driving problem.

The responsibility of the hospitality industry to keep aware of the problem.

Ways of recognizing and controlling service to impaired patrons.

Preventing drinking and driving by intoxicated patrons.

Discussion

No attempt is made during the discussion to deal at length with any of the issues raised in the AV presentation. It is the resolution of these issues that makes up most of the program itself.

Among a group of owners, a brief discussion would focus upon the advantages of having their employees participate in the program and the mechanics of doing so. In a class of servers and managers, participants would be asked their views of their responsibilities in serving alcohol to patrons and assured that whatever questions they raise or concerns they voice would be dealt with throughout the remainder of the program.

Module 2--Needs

This module consists of a 20-minute audiovisual presentation, "The Need for Responsible Alcohol Service," followed by a 30-minute discussion.

AV Presentation

The audiovisual presentation, "The Need for Responsible Alcohol Service," is intended to convince participants of their responsibility for protecting the public by making sure that no one leaves their establishments in an intoxicated condition. At the heart of the program is a presentation by a young woman who became a quadriplegic at the age of 25 at the hands of a driver who became intoxicated at a public drinking establishment. The remainder of the program is intended to communicate information concerning the nature and the magnitude of the drinking-driving problem, the involvement of the public serving establishments in the problem, and the legal obligations and moral responsibilities of servers and managers for helping overcome the problem.

Discussion

The primary objective of this discussion is to convince participants of their moral and legal responsibility to prevent intoxicated patrons from driving. The points stressed include:

- Society's concern for innocent victims of drunk drivers, rather than the drunk drivers themselves.
- Servers' responsibility for upholding the law and not serving intoxicated patrons and minors. Servers are being held accountable for overservice in the same way that drunk drivers are held accountable for overdrinking.

- Alcohol is a drug. Establishments accept the responsibility of dispensing it properly when they receive a liquor license. They are expected to protect the public from any potential harm.

Module 3--Prevention

This module consists of a 20-minute AV presentation followed by a 30-minute discussion.

AV Presentation

The AV presentation, "Preventing Intoxication," describes techniques that may be used by servers to keep patrons from becoming intoxicated. The two major topics are prevention techniques and means of recognizing impairment.

Prevention Techniques--This presentation stresses the importance of regulating service as the key to controlling consumption and, in turn, reducing levels of impairment. Servers are shown using various prevention techniques including:

Checking minors' IDs and verifying authenticity

Encouraging alternatives to drinking like low- and non-alcoholic beverages, food, and activities

Preventing patrons from becoming intoxicated is always preferable to dealing with it afterwards.

Recognizing Impairment--Participants are given instruction as to the kinds of impairment signs to watch for, as well as how to go about observing them. Recognizing impairment signs is presented as crucial to preventing intoxication from occurring. The points stressed include:

Watching patrons for signs of impairment

The sooner that intervention occurs, the better--the easier and more successful it is likely to be.

Discussion

The discussion here addresses server concerns in order to alleviate anxiety about implementing a preventive approach. In order for servers and managers to accept this approach, they must be convinced that it poses no economic threat to their livelihoods or businesses, respectively. The discussion is intended to resolve this issue by pointing out that it is generally better to take steps to prevent intoxication from occurring than to have to deal with drunk patrons.

Module 4--Intervention

This module consists of a 20-minute audiovisual presentation followed by a 30-minute discussion.

AV Presentation

The audiovisual presentation, "Intervening With Intoxicated Patrons," describes the responsibility of servers and managers in (1) terminating service to intoxicated patrons, and (2) preventing intoxicated patrons from driving and becoming a hazard to the public. While it is expected that managers will carry out these activities, it is appropriate that servers also view the presentation in order to exercise their responsibilities in reporting intoxicated patrons and assisting managers in carrying out intervention. The presentation deals with the following steps in intervention:

- o Reporting intoxicated patrons
- o Getting the facts
- o Approaching intoxicated patrons
- o Terminating service
- o Protecting patrons
- o Handling disturbances

Discussion

The point of this discussion is to help servers and managers relate the situations depicted in the AV presentation to what they have actually experienced in their establishments. Most servers and managers have had both success and failure in intervention and, by examining their approaches, can gain insight into more effective techniques for future use.

When managers and servers from the same establishments are attending the program, the discussion can also provide an avenue of communication between the two. For example, sometimes, managers are unaware that servers feel pressure to serve VIPs even when it may involve overserving them. This discussion can help to resolve such issues.

Module 5--Practice

Objectives

In Module 5, role plays permit managers to practice intervention. A total of 1-1/2 hours is devoted to role playing intended to help managers:

Refine their strategies

Develop special techniques for particlar types of situations

Gain greater skill and confidence in using them.

Those not taking part in a particular role play are expected to watch the action critically in anticipation of the discussions that will follow. Each role play is critiqued in order for participants to arrive at effective intervention strategies. Participants can gain valuable insight from their colleagues that should make for better future intervention efforts.

Module 6--Policy

Module 6 is a 1-1/2 hour long discussion designed to help managers translate the prevention and intervention approaches presented throughout the program into policy. This module allows managers to work out policy that can serve as the basis for new or reformulated service practices in their own establishments. The various elements of responsible alcohol service discussed in the course are examined and those which should be incorporated in policy are identified. A checklist is used to enable managers to identify their alcohol service policies where policy might be changed.

Module 7--Training

This 1-hour module is optional and is provided for those participants who are expected to teach the program to others. It is not intended to teach them how to become instructors; that obviously cannot be done through a teaching guide alone. Rather, it is intended to (1) familiarize them with the first six modules of the teacher guide, and (2) acquaint them with the most frequent issues raised in training and how to deal with them.

Instructor Guide

An Instructor Guide was prepared to assist instructors in administering the program of Responsible Alcohol Service. The guide makes up Volume II of this report.* The guide provides three types of material: guidance, technical discussion, and tests.

Guidance

The guidance in the Instructor Guide is organized according to the program's seven modules. Each module provides the following: an Overview, Introduction, and Lesson Plan. Those which have an accompanying AV Presentation also include a copy of the script.

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* McKnight, A. James and Weinstein, Karen, P. "Development and Field Test of a Responsible Alcohol Service Program. Final Report: Volume II, Server Program: Instructor Guide."

Overview--The first section of each module provides an overview of the module's contents including a description of its purpose, its objectives, and the activities of which it is comprised.

Lesson Plan--The second section consists of the Lesson Plan which provides instructors with guidance as to the nature of activities, as well as discussion issues. The Lesson Plan is designed to help instructors anticipate the kinds of issues and questions that may arise and appropriate responses.

Script--For those modules which contain an AV presentation, a script of the presentation is provided. The script is included to allow instructors to preview the presentations before teaching the course, to obtain a better idea of the points of emphasis and the way in which the discussion has been integrated into each module.

Role Plays--Copies of role play scenarios appear at the end of the Guide. These can be duplicated and handed out. A shorter description of each scenario is provided for instructors who would prefer describing the scenes to the class orally, or those who lack equipment for reproducing printed scenarios.

Technical Discussion

A technical discussion is presented at the beginning of the Instructor Guide in order to provide instructors with the depth of information concerning the drinking-driving problem and server responsibility to permit them to handle questions and issues raised by students. It is expected that many instructors will not be well versed in matters relating to drinking and driving. The technical discussion includes such topics as the drinking-driving problem, the effect of alcohol upon driving, the relationship between BAC level and impairment, laws and regulations dealing with alcohol service, and compensation of drunk driving victims through dram shop laws and common law liability.

Laws and regulations regarding alcohol service, server liability, and other aspects of drunk driving vary considerably from State to State. It is not feasible to include all relevant State laws and regulations within the Instructor Guide. The task of compiling such a compendium would be enormous, to say nothing of the problem of keeping it up to date. Therefore, instructors are urged to obtain information bearing upon their State and locality and given information concerning the sources of such information. A very brief summary of the most critical laws, as of 1985, is provided along with caveats governing its use.

Pre and Post-Tests

It was expected that some instructors might wish to assess their accomplishment in improving the knowledge and attitudes of participants relative to responsible alcohol service. To permit this assessment, knowledge and opinion measures were developed. (The development was part of the test of the program which will be described in the next section.) In

the case of the knowledge measure, separate pre- and post-tests were developed in order to prevent prior exposure to knowledge test items from biasing assessment of knowledge gain.

The knowledge pre- and post-tests consist of 10 multiple choice items, each of which provides a sample of material that was covered in the video presentations. The opinion survey also consists of 10 multiple choice items. Each item presents an issue and four alternative opinions which reflect differing attitudes towards intervention. Copies of the knowledge and opinion measures appear in the Instructor Guide.

Where the server education program must be taken to fulfill a requirement, the pre- and post-test versions of the knowledge test could be combined to form one "final examination." Participants would have to pass the test in order to pass the course.

PILOT TEST

The Program of Responsible Alcohol Service was pilot tested to (1) assess its ability to improve knowledge and attitudes toward responsible alcohol service, and (2) identify deficiencies in the program as a means of identifying needed modifications. Actually, the program that has been described is that which resulted from the pilot test, rather than being the program in the form in which it was tested. (It would serve no purpose to provide a detailed description of the program in its original form.) The program underwent continuous revision, with deficiencies identified in earlier tests being corrected before the program was evaluated in later pilot tests. The program that has been described is, therefore, actually the result of a fairly lengthy trial-and-error development process.

Prototype Audiovisuals

A prototype version of the Program of Responsible Alcohol Service was developed for pilot testing. The objectives, content and methods employed in the prototype were the same as those that were described in the preceding section. However, the audiovisual presentation was prepared in slide/tape form rather than as the videos that were ultimately developed. The use of a slide/cassette approach involved less cost and offered greater flexibility.

> Cost--Because the program was likely to require extensive modification following the pilot test, it was imperative that the cost of the pilot test program be held to an absolute minimum. The slide/tape was far less expensive than videotape because the visuals could be more expeditiously obtained. The sound track was also recorded inexpensively because a small number of actors took on several roles.
>
> Flexibility--The slide/tape format allowed for greater flexibility. From the beginning, changes in the script, additions and deletions were anticipated. The slides made such changes just a matter of replacing individual slides and reordering their

sequence. The audio track was also fairly simple to edit; new sections were added by dubbing over old material.

Pilot Test Sites

The Program of Responsible Alcohol Service was pilot tested in two types of sites:

- o Hotels
- o Bars/restaurants

Hotels

Through the cooperation of the Sheraton Corporation, the program was pilot tested at three Sheraton Hotels in:

- o Washington, D.C.
- o New York, New York
- o Bal Harbour, Florida

By working through Sheraton headquarters, arrangements at all three sites could be expeditiously made. For this reason, the hotel pilot tests were administered first. The tests were administered approximately two weeks apart to allow time for revision of the program after each test.

Bars/Restaurants

The participation of individual bars and restaurants was sought at a community level. The cooperation of communities was solicited at a national conference on drunk driving. While several participants expressed an interest, only three communities appeared able to muster sufficient numbers to support a pilot test within the time limits imposed by the project schedule. These were:

- o Louisiana
- o Michigan
- o New Hampshire

The pilot tests in the case of bars/restaurants also provided a way to examine each of the communities as a possible field test site. It certainly was not necessary to confine the field test to one of the pilot test sites to support a pilot test. In order not to use any more of the available subject pool than necessary, the pilot test in each location was confined to one session, not to exceed 25 participants.

Subjects

The subjects consisted of servers and managers from the Sheraton hotels participating in the pilot test, and from individual bars and restaurants in the three pilot test communities. A total of 146 servers and managers participated in the six workshops. Because the distinction between server and manager was not entirely clear in some cases, and because some servers participated in the manager portion of the program, the composition of the participant group cannot be precisely described. However, as nearly as can be estimated, the ratio of servers to managers was approximately 3.5 to 1.

Evaluation Measures

Both objective and subjective evaluation measures were employed. The objective measures consisted of knowledge and opinion surveys, while the subjective measures consisted of forms by which participants could evaluate modules and comment upon their strengths and weaknesses.

Knowledge Test

In its original form, the knowledge test consisted of 27 items employing a three-alternative multiple choice format. The items sampled the informational content of the first four modules (Modules 5-7 did not involve the presentation of information). The same test was given prior to and following administration of the program to hotel participants.

Using data collected from the first three pilot tests, two 10-item alternate forms were developed. The purpose in doing so was two-fold:

- To allow use of two different measures in pre-test and post-test administration, thereby avoiding any spurious information gain resulting from prior exposure to items (subjects would tend to remember answers to items they had seen before, resulting in a spuriously high estimate of information gain).

- To reduce the pre-test and post-test administration time, which originally consumed an hour. Use of the evaluation measures within the pilot test communities, as well as in an operational program, was thought to necessitate a substantial reduction in testing time.

An item analysis was performed on the results of the hotel pilot test. From the original 27 items, 7 items were eliminated on the basis of (1) low discrimination--the overwhelming majority of participants answered correctly on the pre-test, and (2) low part-whole relationship--those scoring high on the test tended to select incorrect answers. The remaining 20 items were divided into two 10-item forms being approximately equal in mean difficulty (less than 1 percentage point difference on pre- and post-test) and covering similar content. These measures, the ones appearing earlier in this report, were then administered to the bar/restaurant group and made a part of the program itself.

Opinion Measure

The original opinion measure consisted of 24 scalar items. Each item presented an issue and four statements of opinion related to that issue. The opinion statements were rank-ordered in terms of the extent to which they reflected a responsible attitude toward the service of alcohol. The original measure was administered to participants in the hotel group.

In order to reduce the time required for administration of the pre-test and post-test, the opinion measure was reduced from 24 to 10 items. Because prior administration of an opinion measure does not introduce any natural bias in administration of the post-test, it was possible to use the same items for both measures. From the original 24 items, 10 items were selected on the basis of:

Discrimination--Items in which responses were spread across all four alternatives were preferred over those in which the majority selected one or two alternatives.

Part-Whole Relationship--Items selected were confined to those in which mean test scores for those selecting each alternative followed a monotonic relationship, with those selecting the most favorable alternative having the highest overall mean score, those selecting the second most favorable alternative having the second highest mean score, and so on.

Content--Items were selected to cover all major issues, and no two items dealt with the same issue.

Subjective Measures

For each module, a form was developed in which participants could provide an overall rating of the audiovisual presentation and discussion as well as describe strengths and weaknesses of each. The instructor paused after each module to give participants a few moments to enter their comments.

During the hotel workshops, it became apparent that participants were prepared to go into a great deal more detail in describing deficiencies orally than in written form. Indeed, most of the constructive information came from the oral critique. For this reason, use of the written form was abandoned after the hotel workshops.

Administrative Procedure

The Program of Responsible Alcohol Service was given in the prescribed sequence at each workshop. In the three bar/restaurant workshops, Modules 1 through 4 were given to servers and managers in the morning, while Modules 5 and 6 were given in the afternoon. However, in the hotel workshops, the practice was to give Modules 1-4 on one day and Modules 5-6 on another. This was necessitated by the schedule of the servers, who generally reported for work in the late morning or early afternoon, too late to permit

administration of the entire program in one day. In two workshops, Modules 5-6 were given to managers on the following day while, in the other, it was given at the end of a three-day period.

The knowledge and opinion measures were administered prior to the first module and after the fourth module. The fourth module marked the end of the information presentation portion of the program and administering it at that time allowed data to be collected from both managers and servers.

Not all the participants arrived early enough to complete the pre-test before the program began, or were able to remain after the fourth module to take the post-test. Of the 146 people participating in the program, 91 completed both pre-test and post-test.

The evaluation measures were not administered at the Concord workshop. Of the approximately 20 individuals attending the Concord workshop, only five were servers or managers. The remainder were owners, representatives of the State Hospitality Association, or representatives of government agencies. It would have been difficult to delay the beginning of the entire workshop in order that five participants could complete the pre-test, particularly in view of the fact that the workshop had already been delayed 45 minutes due to problems with audiovisual equipment.

There's no reason to believe that the failure of slightly more than a third of the participants to complete both pre-test and post-test introduced any bias into the results. The reasons for their inability to complete both tests were primarily administrative, and unrelated to factors that might have influenced test results.

Instructors

A truly valid test of any training program requires that it be taught by instructors representative of those who would ordinarily teach the course. This was done in a third of the hotel workshops. The particular instructor was a member of the Training Department of the Sheraton Bal Harbour and was the one primarily responsible for teaching other courses to hotel employees. She was both a trained and experienced instructor. Since the program requires instructors to participate in the program before attempting to teach it, she journeyed to New York to participate in the second workshop. The first and second workshops were, of necessity, conducted by a representative of the staff that assembled the program.

It would have been desirable to continue the process of using representative instructors to conduct the bar/restaurant workshops. However, it was not feasible to transport a prospective instructor from one pilot test site to another in order to prepare for teaching the program.

RESULTS

This section will describe results obtained from the pilot test of the Program of Responsible Alcohol Service among servers and managers from (1) a

large hotel chain, and (2) small bars and restaurants. Results will be described in terms of knowledges, opinions, and qualitative comments.

Knowledge

Results obtained from the administration of the knowledge test before and after participation in the program are presented in Table 1 below.

TABLE 1
MEAN PERCENT CORRECT ON KNOWLEDGE TEST
FOR
PARTICIPANTS IN RESPONSIBLE ALCOHOL SERVICE PROGRAM

		Pre-Test		Post-Test					
Group	N	Mean	S.D.	Mean	S.D.	r	Diff	t	P
Hotel	59	55.7	17.0	64.1	21.5	.68	8.4	4.0	<.01
Bars/ rest.	32	62.2	16.8	74.1	16.4	.00	11.9	2.9	<.01

The program produced significant knowledge gains for both groups of participants. There was not a sufficient number of managers to permit a meaningful analysis for that group alone. Therefore, the results for managers and servers are combined.

It is important to remember that the test was abbreviated after administration to the hotel group. The differences between the two groups may reflect changes in the test rather than any differences between the pre-test or post-test knowledge of the two groups.

Expressed as a percent of pre-test score, the gains for the hotel and bar/restaurant groups were 15% and 19%, respectively. A more meaningful way to describe the knowledge gain would be to express the changes in the mean score as a function of the distribution of scores. The percent of the post test scores exceeding the mean of the pre-test was 70% for the hotel group and 75% for the restaurant group. The information gain might best be described as "modest."

The groups were not entirely ignorant of the subject matter before the course started nor did they learn everything that was taught. The fact that post-test scores only ranged from 64% to 74% correct, indicates that there is plenty of room for improvement in the ability of the course to communicate information.

The specific post-test questions that were failed by large numbers of students dealt primarily with facts and figures such as the number of alcohol-involved fatalities each year. Given the amount of information that was presented, it is not surprising that students failed to retain a number of these facts. Generally they did a good deal better on more conceptual items, such as those dealing with the nature of server liability.

One interesting finding is the difference between the two groups in the correlation between pre-test and post-test scores. The high correlation for the hotel group indicates that, despite the gains in information, participants maintained their relative standing. In the bar/restaurant group, the gains differed sufficiently to alter the relative standing. We know of no ready explanation for this difference except for the fact that the hotel group received the same questions on pre- and post- tests, while the bar/restaurant group received different items. It is also true that the two groups were discernibly different, the average hotel employee being a great deal older and more experienced in serving than the average bar or restaurant employee. However, why this difference should influence the pre-post test correlation, or what implications it has for instruction, are unknown.

Opinions

The results obtained from the administration of the opinion questionnaire are shown in Table 2.

TABLE 2

PERCENTAGE SCORES IN THE OPINION QUESTIONNAIRE FOR HOTEL AND BAR/RESTAURANT EMPLOYEES

Group	N	Pre-Test		Post-Test		r	Diff	t	P
		Mean	S.D.	Mean	S.D.				
Hotel	60	51.8	7.3	55.3	7.6	.47	3.5	3.4	<.01
bars/ rest.	31	52.7	5.3	59.2	12.8	.33	6.5	2.9	<.01

The numbers shown in the table are composed of raw scores expressed as a percent of the maximum score. Again, the fact that the measure was different for the hotels/restaurants, bars/restaurants makes it inappropriate to compare the scores of the two groups.

Both groups showed a significant improvement. Since there is no true zero value to the opinion measure, it is not possible to express gains as a function of initial scores. However, as was done with knowledge test scores, they can be expressed relative to the pre-test distribution of

scores. The percent of post-test scores exceeding the mean of the pre-test was 68% for the hotel group and 71% for the bar/restaurant group--very similar to the change in knowledge scores. Again, the attitude shift may be considered "modest."

The fact that knowledge and attitude shifts are of approximately the same relative magnitude is noteworthy. It is usually easier to improve knowledge than to alter attitudes. This is particularly true where attitude change is expected to result primarily from the information that is gained. One might speculate that the attitude shift in the case of server liability is relatively less dependent upon information than in other applications. Non-cognitive factors that may play a major role in attitude shifts include (1) the use of server role models in the audiovisual presentation, (2) the taped interview with an injured third party, and (3) the extensive opportunity for discussion among participants.

Participant Comments

While the knowledge and attitude measures provided an objective, quantitative means of assessing change, it was participants' comments concerning various aspects of the course that were most useful in leading to changes in the program. During the earlier pilot tests, these comments were solicited on a participant evaluation form. This form called upon students to rate both the AV presentation and the discussion on scales of 1 to 5. It also invited evaluative comments on both aspects of the program and suggestions for improvement. Separate forms were provided for each module of instruction.

While a volume of comment was supplied, a great deal more was expressed orally than on the form. In short, participants said a lot more than they were willing to take the time to write down. It would be very time-consuming and serve no useful purpose to describe every specific comment received, recommendation offered, or change made. However, relating the major criticisms and recommendation should be helpful in providing a rationale for the content and structure of the program in its final form.

Some of the criticisms and recommended changes affected the program as a whole; others were confined to individual modules. A detailed discussion of the comments appears in Appendix B of this report. These comments are summarized below. Readers desiring more information than is provided in the summary are invited to refer to the appendix.

> General Comments--Use audiovisual presentations primarily to communicate information rather than to serve as a trigger for discussion.
>
> Module I: Awareness--Call upon participants to present issues and questions, but defer discussion of them to later modules rather than discussing them during Module 1.
>
> Module II: Need--Convey more vividly the need to protect innocent victims (rather than just the drinking driver), possibly with someone who was injured by a driver who was the victim of irresponsible alcohol service.

Module III: Prevention--Shift discussion of drinking signs to impairment rather than intoxication, and tie them to prevention rather than intervention; also give more emphasis to the servers' responsibility to notice impairment regardless of the volume of business.

Module IV: Intervention--Broaden the discussion of intervention techniques to consider additional situations; also discuss situations in which patrons should be approached in the company of others versus taken aside and handled individually.

Module V: Practice--Give more emphasis to discussion following role-playing exercises, covering fewer situations and greater depth.

- Expand the range of situations to include the "open bar," intoxicated patrons receiving drinks from others, and enlisting the cooperation of sober patrons.

- Help instructors present scenarios verbally as an alternative to use of written scenarios.

Module VI: Policy--Shift from a presentation of recommended policy to a discussion in which managers commit themselves to policy changes.

PROGRAM EVALUATION

The program of Responsible Alcohol Service was field tested to assess its effectiveness in modifying the behavior of servers and managers of establishments serving alcohol. This section will discuss the evaluation design, sample selection, evaluation measures, and the manner in which the program and measures were administered.

EVALUATION DESIGN

An evaluation of the program of Responsible Alcohol Service was performed using a before-and-after design with comparison groups. The program was administered in a selected set of drinking establishments in two different sites. Data bearing upon the performance of servers was collected before and after the program had been administered in order to assess the effect of the program. The same information was obtained over equivalent time periods from a group of servers not participating in the program in order to control for the effects of factors extraneous to the program.

Experimental Groups

The experimental sample was divided into treatment groups, which receive the program, and comparison groups, which did not receive the program.

Treatment Groups

The treatment groups in each of the field test sites consisted of drinking establishments that were invited to participate and sent one or more representatives. There was, unfortunately, no way to demand that establishments send servers or managers. Therefore, the treatment group was defined, not by the design, but by the characteristics of those servers and managers who accepted the invitation and participated in the program.

Comparison Groups

The comparison groups in each pilot test site consisted of those establishments that did not participate in the program including:

Designated Comparison Groups--These were groups of establishments that have been matched with the treatment group establishments on a number of variables in order to help assure comparability with respect to those factors that influence serving practices.

Default Comparison Groups--The default comparison groups consisted of establishments that were invited to participate but failed to send any representatives. Given the known effect of the "volunteer bias," one can be almost certain that this group differed from both the designated comparison groups and the treatment groups with respect to factors

influencing serving practices. However, they still helped to control for the effect of extraneous variables in that any pre-post changes observed within this group would certainly have called into question any favorable changes observed in the treatment group.

Measures

The measures that were employed in the field test of the server education program included:

Behavior Observations--Observations of servers' responses to project staff members who are presenting signs of intoxication.

Behavior Self-reports--The reports of knowledge, attitude, and behavior administered prior to and following the program.

Knowedge and Opinion Measure--The same knowledge and opinion measures as were employed in the pilot test.

Administration

The specific procedures by which the program was administered will be described shortly. The general approach can be summarized as follows:

1. The participation of establishments making up the treatment group was solicited.

2. Those agreeing to participate were scheduled for instruction.

3. Baseline or "pre" observations were taken over a six-week period prior to program administration.

4. A set of "post" observations were taken over a six-week period following administration of the program.

EVALUATION SAMPLE

The evaluation sample consisted of servers and managers from two different sites. The inclusion of two sites is believed necessary to assure the generality of results.

Sites

Candidate sites were solicited in two ways:

- Solicitations were sent to the State Highway Safety offices through the NHTSA Regional offices.

- As noted earlier, the pilot test sites were also candidates for the field test.

The principal criteria involved in the selection of localities as evaluation sites were the ability and willingness to promote participation of servers and managers in the server education program, the availability of DWI arrest data to aid in identifying establishments as major sources of drinking. Two sites were selected, one in Louisiana and the other in Michigan. The two were similar in population, the Louisiana site consisting of a city with a population of 140,000, while the Michigan site consisted of two neighboring cities with a combined population of 135,000. As will be noted later, the sites also proved similar in distributions of DWI arrests and in numbers of establishments agreeing to participate.

Establishments

Within each site, individual drinking establishments were selected for the experimental sample on the basis of (1) the number of times the establishment was identified as the place of drinking by an arrested DWI, and (2) the observed incidence of drinking within the establishment. Including establishments with a high incidence of drinking had the joint advantage of focusing upon those establishments that were a primary source of the problem and allowing the greatest opportunity for the program to show an effect. (It is difficult to show an improvement in establishments already characterized by highly responsible alcohol service.)

Within each site, the establishments reported as the last location of drinking by two or more arrested DWIs in 1985 were selected for inclusion within the field test sample. A number of establishments selected in this manner was 26 in Louisiana, and 28 in Michigan.

Additional establishments in each area were selected to raise the total of experimental groups to 50 establishments at each site, 100 in all. From the licensed "on-sale" establishments within each area, those observed to have a high incidence of drinking were selected. Excluded were those establishments that were either very small or were primarily engaged in the sale of food. Those establishments that were not well known to members of the project staff were visited during prime drinking hours in order to ensure that they did indeed have a high volume of alcohol sales.

Treatment Establishments

Of the 50 establishments making up the experimental sample at each site, 40 were designated as "treatment" groups. The obvious imbalance between treatment and comparison groups (40 versus 10) assumed that significant numbers of establishments selected for treatment would not participate in the program and would end up forming a second "default" comparison group.

The approach taken in soliciting the participation of treatment establishments was designed both to (1) obtain a sufficient number of participants to permit assessment of the program, and (2) provide an assessment of the program's marketability. To meet these two objectives,

the approach had to be effective in obtaining participation, and yet not employ methods that can not realistically be made a part of a normal marketing effort.

In both sites, invitations were sent to the establishments selected for treatment over the signature of local officials--the Mayor in the case of Louisiana, and the Sheriff in Michigan. Both individuals had been leaders of anti-drunk driving programs in their communities for some time. The invitations included:

- o A brief program description
- o A list of available dates
- o An exhortation to owners to send servers at company expense
- o Announcement of individual certificates to be issued to all servers and managers successfully completing the program
- o An offer of a certificate of recognition to establishments sending more than 80% of their employees.

Each invited establishment was visited by a representative of the project staff and encouraged to participate.

Comparison Establishments

Ten establishments in each area were designated as comparison groups. These "designated" comparison groups were matched with treatment groups on the basis of size and type of clientele (young adult, mature adult, blue collar, student, all of these). As noted previously, the purpose of the comparison groups was to provide a means of registering the effects of any factors other than participation in the program that might affect serving practices. An example of such a factor might be the launching of a law suit against an establishment for some matter related to the service of alcohol. Any pre-post change in serving practices observed in the establishments making up the comparison group would be indicative of the effect of some extraneous factor.

Obviously, it is better to prevent extraneous factors from affecting serving practices than to have to account for them. At both field test sites, efforts were made to prevent the introduction of any new activities that might influence such practices. For example, law enforcement personnel in Michigan agreed to hold off a planned effort to monitor I.D.- checking procedures in on-sale establishments for the duration of the field test (although it was introduced in the case of off-sale establishments).

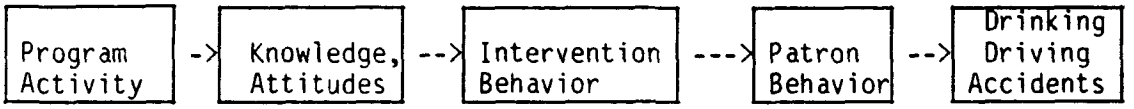
Those establishments invited to participate but failing to send any employees made up a second "default" comparison group. As noted earlier, it is almost certain that the establishments making up this group differed substantially from those making up the treatment groups. However, it was still advantageous to use the group. Since it was not possible to identify the non-participating establishments in advance, pre-program observations

had already been made at these establishments. Not to include the defaulting establishments among the controls would have wasted these observations.

Actually, the treatment group also differed from the designated comparison group as well as from the default group. The fact that the treatment group consisted of only those establishments whose employees participate means that, as a group, it was more "responsible" to begin with than the designated comparison group, many of whom would not have participated if they had been invited. These differences would seriously undermine an evaluation of the program if the treatment and comparison groups were to be directly compared. But in the before-after design there was no direct comparison. The effectiveness of the program was assessed by comparing the experience of treatment establishments both before and after introduction of the program. The fact that the comparison groups contained many potential or actual non-participants does not reduce their value as a means of detecting the effects of regression or extraneous factors.

EVALUATION MEASURES

The ultimate goal of the server education program was to reduce the incidence of drinking-driving accidents. Between the program and the accidents there exists a causal chain, which may be represented by the diagram below:



As depicted in the diagram, a server intervention program is expected to bring about changes in server knowledge and attitudes. These changes are expected to produce changes in the drinking and driving behavior of patrons which, in turn, is expected to change the drinking and driving behavior of the patrons. The final result should be a change in the incidence of drinking-driving accidents.

Evaluation Criteria

Each one of the events depicted in the diagram represents a potential evaluative criterion. While this ultimate criterion of success is the effect of the program upon drinking and driving accidents, the more remote changes become from the program that stimulated them, the more the effect of the program is likely to be obscured of the effects of other variables that may also produce similar changes. For this reason, measures of change at several points along the causal chain were considered.

> Program Activity--The most immediate and direct effect of a program is the activity that is generated by the program itself. In the case of the server education program, the measure of program activity is the number of servers and managers who

participate. Evaluating the level of participation was important in determining the effectiveness of solicitation procedures in obtaining participation of servers and managers.

Knowledges and Attitudes--The ability of the program of responsible alcohol service to produce changes in knowledges and attitudes relative to server intervention was established in the earlier pilot test. However, since it is through changes in knowledge and attitude that any changes in behavior would be induced, measuring change at this level was desirable in trying to interpret behavioral changes.

Intervention Behavior--If the program of responsible alcohol service is to have an impact on drinking and driving, it must produce significant changes in the behavior of servers and managers. Behavior changes were assessed in two ways: through the servers' and managers' self-reports of their own intervention behavior, and the observations of their behavior by objective observers.

Patron Behavior--Effective intervention should reduce patron overdrinking. However, measures of behavior are very difficult to collect and are influenced by variables other then intervention. For these reasons, measures of drinking-driving behavior were not sought.

Drinking-Driving Accidents--While the ultimate goal of server intervention is to reduce the incidence of drinking-driving accidents, the number of such accidents is far too few, and the accuracy with which alcohol involvement can be assessed is far too inaccurate to permit accidents to serve as an evaluative criterion.

The four evaluation measures employed, then, were observations of intervention behavior, self-reports of intervention behavior, measures of knowledge and attitude, and measures of program activity.

Observations of Server Behavior

The criterion most indicative of program effectiveness was the objective observation of changes in intervention behavior. This section will describe the development of observational approaches.

Study of Observational Approaches

Prior to initiating the field testing of the program of Responsible Alcohol Service, two alternative approaches to observation of intervention behavior were tried out and assessed. These involved:

Actual Impairment--Observation of server performance in response to truly impaired patrons.

Simulated Impairment--Observation of server responses to impairment simulated by the observers.

The observations of true impairment offered the advantage of being an inherently valid criterion. The server behavior being observed would be in response to the signs of impairment manifest by actual patrons. Questions concerning the feasibility of this criteria involved (1) how much observational time would be necessary to actually witness servers responding to impaired patrons, and (2) the ability of observers to truly witness the interaction between servers and patrons.

The advantage of simulated impairment was the ability to assure that each visit to an establishment would indeed result in an observation of server behavior as well as the ability to present a controlled set of impairment signs to servers. The primary disadvantage was the question of whether the signs of impairment exhibited by the observers were truly valid. If they were not, servers might respond to observers in ways that differed from their responses to actual patrons.

A series of observations were carried out by members of the project staff in the Washington, D.C. area. The procedures used in, and results obtained from, application of each method are described in Appendix C. Based upon the results of the observations, an approach relying primarily upon simulated impairment was selected. It became evident that the limited number of visits that could be scheduled during a field test would provide little opportunity to observe a server's response to intoxicated patrons. Simulasted impairment would permit every visit to result in an observation of server practice.

While simulated impairment was selected as the primary measure of server behavior, the fact that observations of any freely occurring instances of intervention could readily be made at the same time warranted an inclusion of actual impairment as a secondary criterion. After acting out signs of intoxication, the observers could not simply head for the door without arousing suspicion. It was necessary for them to remain for at least 15 minutes. During this time, they would have an opportunity to observe other patrons and note how many appeared to be intoxicated. During such a brief period of observation, it is unlikely they would witness many instances of intervention. If the result of the program were really to lead to more responsible alcohol service, it might possibly show up in a decline of the number of intoxicated patrons observed even during a short time. It is important to emphasize, however, that the collection of information from actual impairments was only a secondary criterion.

Levels of Simulated Impairment

Having decided to simulate impairment, it became necessary to decide on the levels of impairment. From the results of the study of observational approaches it seemed very unlikely that signs of impairment below the level of intoxication would produce any server response. Moreover, under the law, servers are not required to intervene in the drinking of patrons unless they are visibly intoxicated. It seemed pointless to devote observations to intervention behavior in response to subtle signs of impairment. Therefore,

controlled observations were confined to acting out signs of impairment corresponding to legal intoxication.

Observation Procedure

The procedure employed in collecting behavioral information was as follows:

- Observers were assigned certain establishments to be visited and told whether to sit at the bar or at a table (depending upon earlier visits). The assignments established geographical groups. This allowed observers to visit several establishments in one night with minimal travel time. The observers were permitted to schedule their visits around their other obligations. However, they were required to submit their schedules one week in advance.

- Upon entering an establishment, the observer proceeded to the bar or to a table to request service. The location was alternated in such a way that the observer went to the bar half the time and to a table half the time.

- Upon encountering a server, the observer placed an order while acting out signs of intoxication. The signs that were acted out included (1) swaying or staggering from the table to the bar/table, using the hands as out-riggers; and (2) "missing" the stool or chair when attempting to sit down; (3) slurring of speech; (4) difficulty in extracting money from the billfold in order to pay for the drinks.

- The beverage ordered was always beer. In addition to being the cheapest alcoholic beverage, its alcohol content was assured (a mixed drink could be weakened without the observers realizing it). The drink was not to be consumed.

- After the order was taken, observations were made of other patrons in the establishment. The observer estimated the number of patrons being served, counted the number that met the criterion of "visibly intoxicated", the number of drinks served to apparently drunk customers, and whether or not patrons of questionable age were checked for I.D.

- A minimum of 15 minutes was spent in the establishment making observations. If service was slow, the observations could be made before the order was placed.

- Observers carried out the process alone. It was undesirable to provide any indication to servers that the observers had anyone to take them home or otherwise assist them.

- Upon leaving the establishment, the observers recorded the following information on a small casette recorder kept in their cars:

1. Observer name.
2. Name of establishment.
3. Time in.
4. Time out.
5. Level of business (light, moderate, very busy).
6. Day/date (at the beginning of each observation session).
7. Type of server (waiter, waitress, bartender, other).
8. Symptoms of intoxication acted out.
9. Number of other patrons appearing to be intoxicated.
10. The nature of server intervention, if any.
11. The number of other patrons observed to be intoxicated.
12. Number of drinks served to apparently intoxicated patrons.
13. Number of apparently under-age patrons checked for I.D.

A checklist of the above information was kept in the car as a reminder.

There is no indication that any of the servers recognized or even suspected that the behavior exhibited by the observers was anything but genuine. Half of the observations were made before the program was given, yet none of the servers or managers ever mentioned patrons whose behavior was suspicious. One waitress did cite an occasion on which she reported to her manager an intoxicated patron who, when the manager arrived, appeared to be completely sober. However, she nor any other server mentioned an instance in which they believed patrons were feigning intoxication.

Observers

Three observers were engaged at each site. All were of legal drinking age, between age 21 and 24. This relatively young age frame was necessary to allow observers to visit all establishments, some of which were student hangouts, without appearing out of place. All observers were male. This was not a requirement. However, none of the women interviewed for the job were willing to enter drinking establishments unaccompanied late at night.

Observers were recruited from among acquaintances of local evaluation coordinators. It would not have been a good idea to advertise for people to observe alcoholic beverage serving practices. If servers, managers, and owners were aware that observations were being made, the observations might have ended up measuring response to the observations rather than to the program.

All observers were informed that their activities must be kept strictly confidential and that any violation of confidence would result in their being dismissed from this project. Since they were being reasonably well compensated for their efforts, it was in their interests to accept this constraint.

Training sessions were held during which observers were informed about the project and its purposes, instructors carrying out procedures, and required to act out various signs of intoxication. Their performance was videotaped and reviewed by the observers themselves and the project staff.

As a means of quality control, the performance of observers was monitored on a random basis once each week. The observers were informed of this and assured that the procedure was instituted for purposes of scientific quality control, and not because the observers were not trusted. While they were informed that their performance would be monitored, they were not told when or by whom it was to be done. They had no way of knowing, therefore, when they were being watched and therefore had to assume that it could occur at any time.

The monitors were unacquainted with the observers. They were given an opportunity to view the videotapes of the observers in order to recognize them and were provided the observers' schedules in order to time each visit to coincide with that of the observer. They were to report whether the observer showed up, how long the observer stayed, and whether the observer exhibited "visible" intoxication.

Quality Control

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Audiotapes used by observers were given to the local site coordinator as soon as they were filled. The area coordinator forwarded the tapes to the project staff on a continuous basis, making a quick tally before forwarding each tape to guard against the loss of data should something happen to the tape in the mail.

All tapes were processed independently by two staff members. Since the coding of observations was relatively objective, there were very few disparities in coding them. However, when disparities did arise, or when data entry clerks had any doubt as to the appropriate code, it was brought to the attention of the Project Director who sought clarification with the observers through the site coordinator. The most frequent causes of ambiguity, or discrepancy, between coders were the following:

- o Slow Service--Intervention or the result of excessive business?
- o Offering Menus--Pushing food or normal practice?
- o Asking if observer is okay--Real concern for sobriety or just a perfunctory question?

The conditions surrounding the observation were considered in determining whether a particular response represented intervention. For example, a delay in service that occurred on an evening when the observer had reported the volume of business to be very light was more likely to be interpreted as intervention than if it occurred on a busy night. The profferring of menus during what was normally the dinner hour in an establishment that was primarily a restaurant would not be treated as intervention, while the same response at 10:00 p.m. in an establishment that was primarily a tavern would be.

To prevent any bias from entering the coding, data entry clerks were not told which were treatment and which were control establishments, nor did the establishment identification code provide any clue.

Behavior Self-Reports

Self-report measures were developed to permit reporting of both server practices and management policy. The server questionnaire describes 22 serving practices to which servers responded by indicating the frequency with which they engaged in those practices, ranging from "never" to "all the time". The practices involve general service of alcohol, checking I.D.s, handling of patrons who are impaired, handling patrons who are intoxicated.

The management questionnaire presents 32 items of alcohol policy to which managers were to respond by indicating whether they have adopted the policy or not. Copies of each questionnaire appear in Volume II of this report.

Role of Self-Reports

Behavior self-report measures are very valuable in assessing behavior that occurs too infrequently to be readily observed by others. Drinking/driving self-reports have been used extensively to assess the effectiveness of educational programs aimed at reducing drunk driving.

The validity of self-report measures has frequently been challenged on the grounds that people are generally inclined to give more favorable, "socially desirable" reports of their own behavior than is warranted. In a before-after evaluation of a program, participants in a program might be inclined to report favorable changes in behavior because they think that changes are desired rather than because of a change in their actual behavior.

There's no way of knowing to what extent self-reports are influenced by various response biases. Past experience is encouraging in that reported changes in behavior have tended to be specific to the behavior covered in a program. If respondents were simply trying to favor themselves or the sponsors of the program, they would presumably report changes in a favorable direction regardless of what those behaviors are.

Development of Server Practices Reports

From the objectives of the program, a list of performances servers were expected to perform were prepared. From this list of practices, items were prepared to permit servers to indicate the extent to which they employed various practices. Each item presented a practice and a skill of the frequency with which the practices were employed, including "never", "rarely", "occassionally", "frequently", "all the time". There was also a "not applicable" response for those who for some reason or another were not presented with situations calling for the practice.

The draft version of the practices questionnaire was administered to 25 servers in the Washington, DC area as a test of its administrative feasibility. In addition to taking the measure, servers were asked to comment upon the priority of the questions. Responses were analyzed, and the courses reworded where server comments indicated the need for it, or where the practice, as described, was rarely performed. A copy of the server practices questionnaire can be found in the Instructor Guide that makes up Volume II of this report.

Development of Management Policy Reports

From the objectives of the program, a list of issues that are presumably reflective of establishment policy was prepared. Many of these issues involved server practices, such as providing snacks without being asked, or having young patrons sign that their I.D.s have been checked. Other issues were solely matters of policy, such as disciplining employees who serve intoxicated patrons, closing the bar an hour before establishment closing, stocking non-alcoholic beers and wines, etc.

A list of 34 policies was prepared in the form of a checklist calling upon managers to indicate whether or not their establishment had adopted the activity as a policy. The questionnaires were then sent to managers and owners of 25 licensed establishments in the Washington, D.C. area. Like the servers, they were asked to both respond to the questionnaire and to comment upon the clarity with which they were described. All of the policies were adopted by one or more of the establishments, and therefore were retained on the questionnaire. However, several of them were re-worded to overcome the ambiguities identified by the managers. A copy of the policy questionnaire may be found in the Instructor Guide in Volume II of this report.

Administration of Self-Reports

The self-reports were administered to servers and managers prior to and following the program. To avoid extending the duration of the workshop, the measures were given to participants at the time they signed up and they were asked to complete them ahead of time. Those unable to do so completed them immediately prior to the workshop.

Administration of follow-up questionnaires occurred approximately four months after completion of the workshops. This delay was to allow sufficient time for practices and policy to change. Participants were asked to sign their names to the questionnaires in order to compare results across the administration of the same measures. This was necessary to assure that

pre- and follow-up administrations revealed differences in practices rather than simply differences in the composition of the samples participating in the different administrations. To encourage candor, participants were assured that their responses will be held in strictest confidence.

ADMINISTRATIVE PROCEDURES

Procedures for carrying out the field test involved solicitation of participants and administration of the program.

Solicitation

The solicitation process has been referred to earlier in the discussion of the field test design. At both field test sites, a letter was sent to the managers of those establishments selected for inclusion in the "treatment" group. This letter pointed out the importance of training in responsible alcohol service, both as a responsibility to the public and to protect establishments against law suits. It introduced the program, the period of time in which it would be given, and the fact that it would be available without cost.

As noted previously, the solicitation letters were signed respectively by the Mayor in Louisiana and by the Sheriff in Michigan. Having the letter signed by a fairly senior local official was intended both to lend credibility to the program and to apply some subtle pressure. Certainly, owners of restaurants and bars are not intimidated by local officialdom. However, the average citizen likes to stay on the good side of City Hall and/or the police, particularly if they can do so without appreciable expense to themselves. Individual participants received wallet-sized certificates testifying to their successful program completion. Establishments sending 90% or more of their staff received a certificate suitable for framing.

Sponsorship of the program by the U.S. Department of Transportation was acknowledged in order that prospective participants would not become suspicious over the fact that the program was to be given without charge. Invitees were informed that someone would contact them shortly to arrange their participation.

A follow-up call was made approximately one week after the letter was sent and an appointment for a visit was scheduled. During the visit, a project representative explained the program and the advantages of participating. Participants were surveyed to identify preferred days of the week and hours of the day.

Those planning to participate were sent a second letter announcing the dates and locations of the workshops. They were invited to call the local representative in order to schedule participation by their staffs. Inducements to participation (as noted above), included certificates for servers and managers and recognition awards for participating establishments. A few days after the letters were mailed, a representative

of the project staff called each of the establishments to attempt to schedule participation.

As was pointed out earlier, it didn't seem reasonable to employ solicitation techniques that would not be feasible as part of a normal marketing effort. To do so would not permit an assessment of the marketability of the program, and could also produce participants who were not fully representative of servers and managers in general, thus preventing a valid assessment of the program.

Administration of Program

Instructors

The instruction given, like the marketing, was intended to be representative of the program. Unfortunately, recent history does not provide information enough to determine who will teach responsible alcohol service once administration becomes widespread. Most of the courses given up to the present time have been administered by specialists in organizations created solely for the purpose of giving those particular courses. However, one might speculate that the following types of people might be part of a network for teaching responsible alcohol service instruction:

Hotel/Restaurant Management Courses--Instructors who teach hotel/restaurant management courses to colleges and technical schools have the knowledge and presumed motiviation to sponsor the course, as well as enjoying credibility among students. While training for responsible alcohol service is not likely to become part of a degree program, it might be offered as a form of adult education in vocational schools and community colleges.

Anti-Drunk Driving Programs--Programs in responsible alcohol service have been launched primarily as an anti-drunk driving measure. Sponsors of these programs include law enforcement agencies, local and state task forces, activist groups, and safety organizations. Although perhaps not teachers by background, many of the instructors have developed considerable experience and skill to add to the zeal which they bring to the subject.

Bartender Schools--Some of the past efforts to promote responsible alcohol service comes from bartending schools, which not only include it in their basic curriculum, but also offers it as a separate course. If there is a demand for server training courses, bartending schools certainly have had an entrepreneurial interest in filling it.

Serving Establishments--those establishments of considerable size, such as hotel chains, or large restaurants, may be expected to run programs for their own employees. They have the advantage of being able to tailor the program to idiosyncrasies of their trade.

In the field test it was considered advantageous to engage instructors with as many of these backgrounds as possible. The distribution of instructors across these specialties is shown below:

SPECIALTY	LOUISIANA	MICHIGAN
Hotel Management		1
Anti-Drunk Driving		2
Serving Establishment	2	
Bartending School	1	

All instructors were required to participate in at least one class and in the training program called for as part of instructor preparation. The control classes and the training programs were run by the Principal Investigator as part of the field test.

Facilities used for instruction in operational programs will generally be provided by the organization carrying out the instruction. Arrangements were made through the sponsoring organizations for access to public facilities. In Louisiana, the program was held at City Hall, while in Michigan they were held in a classroom of the Sheriff's Department.

Workshop Schedules

In meetings with establishment owners and managers, it became apparent that obtaining a high level of participation demands flexibility. A program must be held at a number of different times on a number of different days in order to accommodate the staff of any one establishment. To provide necessary options, classes were scheduled for three different times over several days. The times were 9 a.m. - 12 p.m., 1 p.m. - 4 p.m., 7 p.m. - 10 p.m.

Three out of every four classes were for servers and managers (the first three hours) while one out of four were for managers only (the last three hours). Participants could attend any session they wished, subject to the provision that (1) managers successfully complete the server/manager program before attending the manager program, and (2) advance enrollment was necessary in order to limit attendence at sessions to a manageable number and to provide the test measures in advance. The class size for the server/manager program was no more than 25. This size facilitates the classroom discussions that characterize the server/manager program.

RESULTS

The results obtained from the field test will be discussed in terms of the four sets of measures employed:

- o Program activity
- o Behavior observations
- o Behavior self-reports
- o Knowledge and attitude measures

Program Activity

Of the 40 establishments solicited for program participation in each site, 16 responded by sending one or more participants. Actually, one of the participating establishments in Michigan was not among those solicited. However, since it shared ownership and many servers with one of the participating establishments, it was included. This expanded the total sample of establishments in Michigan from 50 to 51, with 16 becoming part of the treatment group and 35 falling in the control group.

The number of participants per establishment ranged from 1 to 20 in Louisiana and 1 to 17 in Michigan. In both sites, the median number of participants was 9. Also, at each site, the highest number of participants was furnished by an establishment that sent its entire staff at the expense of the establishment.

Some 108 servers and 33 managers participated in the Louisiana program, while 82 servers and 22 managers participated in the Michigan program. These numbers represent but a small fraction of the numbers of servers and managers employed by the establishments that were invited to send participants. Just what portion of the invited population the number represents is not known; the staffing levels of the invited establishments were not available and could not be obtained without considerable expense. However, it became very evident that only a minority of servers and managers were willing to make available the time needed to participate in the program, despite the inducements that were offered and the effort that was made to accommodate participants in scheduling the program.

Within the establishments that did participate, the level of participation was fairly high. In Louisiana, 93% of the managers and 71% of the servers in participating establishments attended the program. Eight of the 16 establishments sent their entire staffs. In Michigan, participation was a little lower with 76% of the managers and 69% of the servers participating and only 1 establishment sending its entire staff.

In short, while only 16 of the 40 invited establishments at each site participated, those establishments sent the majority of their managers and servers.

Behavior Observations

The plan called for four observations of server response to simulated impairment to be made at each of the 50 establishments in the two sites during each of the two time periods (pre, post). However, temporary and permanent closings occurring after establishments were designated as part of the experimental sample led to inability to make observations in all establishments and, therefore, shortfalls in observations. Table 3 below shows the percent of planned observations actually made at treatment and control establishments in each site both before and after the program was given.

TABLE 3

PERCENT OF PLANNED OBSERVATIONS ACTUALLY MADE --
BY EVALUATION SITE, EXPERIMENTAL GROUP, AND PERIOD OF TIME

	LOUISIANA		MICHIGAN	
Time	Treatment	Control	Treatment	Control
	(16 places)	(34 places)	(16 places)	(35 places)
Pre	97%	93%	98%	100%
Post	97%	93%	95%	96%

As is evident from the table, over 90% of the scheduled observations were completed. The fact that the Michigan shortfall is greater during the post period is due to the number of establishments that closed during the summer.

Analysis of Server Actions

Observers reported the specific response of servers to their requests for alcohol service made while they were manifesting signs of intoxication. The responses could readily be grouped into the following seven categories:

1. Service without intervention
2. Service, but inquires as to the condition of the patron
3. Service, but suggests food, soft drinks, or other alternatives
4. Service, but is deliberately slow in providing it
5. Service, but inquires as to whether the patron drove
6. Service, but for the final time
7. No service

The server responses to the observers exhibiting simulated signs of intoxication are categorized by site and time period in Table 4.

TABLE 4

DISTRIBUTION OF SERVER ACTION BY EXPERIMENTAL GROUP, SITE, AND TIME PERIOD

SERVER ACTION	LOUISIANA				MICHIGAN			
	Treatment		Control		Treatment		Control	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	N=62	N=62	N=127	N=126	N=63	N=61	N=141	N=135
Service, No Interven.	92%	90%	93%	85%	87%	72%	86%	86%
Service, Status	3%	3%	4%	2%	3%	7%	6%	5%
Service, Alternatives	3%	3%	3%	10%	3%	0%	3%	4%
Service, Slow	2%	0%	0%	0%	3%	2%	3%	0%
Service, Transport.	0%	0%	0%	0%	0%	0%	0%	1%
Service, Final	0%	0%	0%	0%	0%	3%	1%	0%
No Service	0%	3%	0%	2%	3%	16%	2%	4%

It is evident from the table that relatively little intervention was exhibited by servers in treatment or control establishments at either site or in either time period. On the whole, the results parallel those obtained during pre-testing of the observational procedure, as described in Appendix C.

In both sites, there appears to be somewhat more intervention after the program than before. This change is most clearly evident in the pre-post difference in the percent of servers falling into the "no service" category. In all cases, this percent increased from pre to post--both treatment and control groups in both Louisiana and Michigan. In Louisiana, there doesn't appear to be any substantial difference between the treatment and control establishments with respect to the degree of change. In Michigan, however, the increase in "no service" intervention seems to be greater among treatment establishments than control establishments. There is also some evidence of change in the "service, no intervention" category where the percentages dropped in all cases except the Michigan control group, in which the percentages remained the same.

The only other notable change was the marked pre-post increase in the number of servers who pushed alternatives in the Louisiana control group. There is no ready explanation for this change.

The effectiveness of the program in fostering server intervention behavior should appear through a greater pre-post difference within treatment groups than within control groups or, expressed in other terms, in interaction between GROUPS (treatment versus control) and TIME (pre versus

post). Such an interaction seems to occur in Michigan where the "no service" intervention leaped from 3% to 16% within the treatment group but from only 2% to 4% within the control group. At the same time, the lack of intervention, "service, no intervention", dropped from 87% to 72% within the treatment group but remained at 86% within the control group. On the other hand, no such interaction occurred in Louisiana, where the pre-post increase in "no service" was approximately the same for treatment and control groups, while the drop in service without intervention was actually greater in the control group (93% to 85%) than within the treatment group (92% to 90%). What Table 4 shows is a three-way interaction among GROUP, TIME, and SITE with respect to server action with a greater pre-post gain in intervention among the treatment group than the control group, but in Michigan and not Louisiana.

The crucial question is, of course, whether this three-way interaction is statistically significant or attributable to chance variation. A test of significance can be performed on the categorical data shown in Table 4 through the use of hierarchical log-linear models. However, such an analysis is designed to assess relationships among variables, not the effects of various factors upon a single dependent variable. Moreover, the analysis requires making multiple comparisons which must be adjusted for in determining chance levels, with a result that significance is harder to attain.

Intervention Level

A more powerful test of significance can be performed if server action could be validly changed from the categories analyzed in Table 4 to a quantity which could be subject to parametric analysis using analysis of variance techniques. Within the series of seven categories by which server actions were classified can be distinguished three quantitative levels of intervention:

Service without intervention

Service with some form of intervention

No service

For purposes of parametric analysis, the three levels were assigned the values: 0, 1, and 2. We shall refer to this variable as "intervention level."

The mean pre- and post-intervention values for treatment and control groups at both sites appear in Table 5. The results show rather more simply the same outcomes as appeared in Table 4.

TABLE 5

MEAN INTERVENTION LEVEL BY EXPERIMENTAL GROUP, SITE, AND TIME PERIOD

Time	Louisiana			Michigan			Total
	Treatment	Control	Both	Treatment	Control	Both	
Pre	.08	.07	.07	.16	.16	.16	.12
Post	.13	.17	.16	.44	.18	.26	.21
Diff	.05	.10	.09	.28	.02	.10	.16

The effectiveness of the intervention program would be evident in a pre-post rise in intervention level for the treatment group but not the control group. Such a result appears to have occurred in Michigan, where the intervention level of the treatment group showed a gain of .28, while that of the control group was virtually unchanged (.02). The net difference was (.28-.02) .26. However, in Louisiana, both groups improved slightly. Among the treatment group, the intervention level rose from .08 to .13, while among the controls it rose from .07 to .17. It would appear that the program had a more beneficial effect in Michigan than in Louisiana. The statistical significance of this result is evident in a three-way, GROUP x TIME x SITE interaction (F=5.529; P=.019; see Appendix D-1). The fact that the program was not effective across both sites appears in a non-significant GROUP x TIME interaction.

There is a significant pre-post difference across both groups and both sites (F=9.033; P=.003). Most of this effect is clearly due to the large pre-post difference within the Michigan treatment group. However, there was a general upward drift in intervention level within both groups and at both sites, suggesting that at a small portion of the effect noted is due to factors extraneous to the program.

It is apparent from Table 5 that the intervention level in Michigan was greater than that in Louisiana even before the program went into effect. A significant overall SITE effect (F=8.671) means that Michigan's somewhat higher overall intervention level is statistically significant. Part of this effect is doubtless due to the large gain in intervention within the treatment group. However, it appears that Michigan establishments were more amenable to intervention in general. These site differences will be discussed later.

Participation and Intervention

As noted previously, the level of participation within treatment establishments varied from a single server or manager to as many as 20--almost the entire establishment. The likelihood that an observer would encounter a trained server within a treatment establishment obviously varied with the percent of the employees who were trained. If training is having

any effect upon the likelihood of intervention, then the chances that a particular observation will result in intervention might be expected to vary as a function of the likelihood that the specific server encountered has been trained. The result would be a positive correlation between the level of intervention exhibited on any trip and the level of participation within the establishment.

The correlation between post-program level of intervention and level of participation was .029--essentially zero--across all sites. However, when data from the two sites were analyzed separately, somewhat different results were obtained: the correlation between level of participation and post-program intervention in Louisiana was -.24, while in Michigan it was +.20. Neither result is significant with only slightly over 60 establishments. At least the relationship in Michigan is in the right direction, with increased participation being associated with increased intervention. There is no ready explanation for an opposite finding in Louisiana. The fact that higher participation was associated with slightly lower intervention is unlikely to represent a causative relationship but is probably due to other characteristics of the establishments involved.

The possibility that level of participation may be associated with intervention level led to an analysis of covariance in which the data shown in Table 5 were adjusted for differences in participation level. Control for participation level had no effect upon the means shown in Table 5 or the test of significance associated with those means.

Intervention in Actual Impairment

In addition to simulating signs of intoxication, each observer noted the number of instances in which patrons manifested signs of actual intoxication. As pointed out in the discussion of methodology, observation of response to actual patron intoxication was believed to be a less reliable criterion of server behavior than response to simulated observed intoxication since it was influenced as much by the characteristics of the patrons, and the observer's ability to see and hear them, as it was by the activities of the server.

In Louisiana, the number of visits in which an obviously intoxicated patron was served was almost the same before and after the program, 6% and 5% respectively. In Michigan, the percent of visits in which an intoxicated patron was served dropped from 13% before the program to 8% afterward. However, the 5% drop occurred among both the participating and non-participating establishments and, therefore, cannot be attributed to the program. There was no significant GROUP x TIME x SITE ($F=.036$; $p=.849$).

Level of Business

Another variable that might be related to intervention is the level of business. This variable was studied in relation to (1) intervention level, (2) pre-post group differences, and (3) program effects.

Level of Business and Intervention

The level of business at the time the visit was made was classified by the observer into one of three levels: light, moderate, and heavy. An analysis of server intervention by business level showed a linear relationship with intervention being the highest when the level of business was the lowest. A one-way analysis of variance showed the differences to be of but marginal significance ($f=2.76$; $p=.06$). However, when the linearity of the relationships was taken into account through a test of linear contrast, the linear component proved significant ($t=2.06$; $p=.04$).

The relationship between level of business and intervention was also studied in relation to actual intoxication. The same pattern emerged with the likelihood of serving intoxicated patrons increasing with the level of business. Again, the difference in intervention by business level was not quite significant in a simple one-way analysis of variance ($f=2.96$; $p=.053$), but yielded a significant linear contrast ($t=2.41$; $p=.02$).

It appears, then, that servers are more likely to intervene when the volume of business is light. This relationship is certainly understandable; the greater the volume of business, the less time servers claim to have to detect intoxicated patrons.

Intervention was also found to be related to day of the week, being greatest early in the week and declining toward the weekend, with Sunday being equivalent to the middle of the week. However, business level also followed the same weekly pattern, indicating that relationships between the day of the week and intervention were a function of the level of business.

Intervention of servers with both observers and patrons was analyzed by category of server to see if there were any differences in the actions of waiters and waitresses on the one hand and bartenders on the other. While waiters and waitresses showed a slightly higher level of intervention, the differences fell far short of significance.

Level of Business and Group Differences

The significant relationship found between level of business and intervention raises a question as to the effect to which these differences might bias the pre-post comparisons shown in Table 5. To help ascertain the extent to which level of business could account for such results, an analysis was made of business level by GROUP, SITE, and TIME. These are shown in Table 6.

TABLE 6

MEAN LEVEL OF BUSINESS BY EXPERIMENTAL GROUP, PERIOD OF TIME, AND SITE

Time	Louisiana		Michigan	
	Treatment	Control	Treatment	Control
Pre	1.90	1.88	1.97	1.77
Post	1.67	1.85	1.74	1.52
Diff	.23	.01	.23	.25

The business level showed a significant decline over time across all establishments, both treatment and control, and both sites (F=9.12; p=.003: see Appendix D-2). However, the decline was significantly greater in Michigan than in Louisiana (F=4.78; p-.029). The decline in level of business in Michigan was about the same for both treatment and control groups, as reflected in a non-significant GROUP x SITE x TIME interaction (F=.83; p=.36).

Level of Business and Program Effects

To determine positively whether differences in business level were responsible for the results shown in Table 5, the same analysis of variance was performed, using level of business as a covariate. Table 7 presents the results previously shown in Table 5 adjusted for level of business.

TABLE 7

ADJUSTED MEAN INTERVENTION LEVELS BY EXPERIMENTAL GROUP, SITE, AND TIME PERIOD

Time	Louisiana		Michigan	
	Treatment	Control	Treatment	Control
Pre	.08	.08	.15	.16
Post	.13	.16	.38	.16
Diff	.05	.08	.22	.00

A comparison of the adjusted intervention levels with the original intervention levels shown in Table 5 reveals that, while level of business had a marked effect upon the intervention levels, they did not have an appreciable effect upon the outcome of the program evaluation. The

pre-post differences between treatment and control groups in Michigan only dropped from a net of .26 to .22.

The analysis of covariance table reveals that variation in business level accounted for a significant portion of the variation in intervention level (F=4.28; p=.039; see Appendix D-3) and reduced the F level of the three-way GROUP x TIME x SITE from 5.529 to 4.221. However, the interaction was still significant (p=.04). While the covariance adjustments reduced the interaction mean-square, they also reduced the error mean score. In short, while differences in level of business influenced the intervention level, they did not have an appreciable effect upon the differences between Michigan treatment and control groups.

Behavior Self-Reports

Prior to each class, participants were given a questionnaire with which they reported upon their behavior. Servers were asked to report upon their serving practices by indicating the frequency with which they engage in those practices, e.g., offering coffee, inquiring as to who is driving, terminating service, etc. Managers were given a checklist of alcoholic beverage service policies (e.g., closing hours, availability of snacks, etc.) and indicated whether their establishments employed those policies. Approximately four months later, followup questionnaires were sent to both servers and manager. Again, servers were asked to report on practices while managers reported on policy.

In Louisiana, responses were obtained from 55% of the servers and 64% of the managers. In Michigan, responses were obtained from 29% of the servers and 41% of the managers. There is no ready explanation for the one-third difference between the two sites in responsiveness to followup questionnaires, except that this difference parallels the difference in responsiveness to invitations to participate in the training program itself. Repeated visits to establishments were needed to obtain even this level of response. Most of the non-respondents had ceased working at the participating establishments and could not be contacted. In a few cases, servers had been promoted to managers and were no longer engaged in alcohol service.

Service Practices

The results for practices reported by servers appear in Table 8.

TABLE 8

MEAN PRE AND POST SCORES ON SELF REPORTS OF PRACTICES BY SERVERS

Time	Louisiana (N=59)		Michigan (N=25)	
	Mean	S.D.	Mean	S.D.
Pre	2.87	.75	3.04	.59
Post	3.31	.72	3.62	.69
Diff	.44		.58	

Changes toward more responsible serving practices were reported by servers in both sites. Correlated one-tail t-tests showed the changes to be significant in both Louisiana ($t=5.76$; $p<.01$) and Michigan ($t=4.09$; $p=<.01$). It is noteworthy that the improvement reported by Michigan servers was slightly greater than that of Louisiana servers. However, the differences between the two sites are not statistically significant.

The improvement in serving practices reported by Louisiana servers is not consistent with the observations that were carried out in Louisiana. This inconsistency does not mean that either data set are incorrect. The server responses to the simulated intoxication of research staff members represents but a small part of total server behavior. There could well have been a small shift toward more responsible service that simply did not manifest itself in the interactions of Louisiana servers with the staff observers. A greater overall change in the behavior of Michigan servers would have increased the likelihood that changes would be observed.

The subjectivity of self-reports was acknowledged in earlier discussion. It is possible that servers reported what they think the authors of the report form want to hear rather than their actual behavior. However, as was also noted earlier, the failure of several previous investigations to find changes in reported intervention make it clear that any tendencies to report "desired" results are certainly not universal. Moreover, servers were asked to report their actual behavior, not changes. Any deliberate attempt to show improvement would require for its success that servers remember their responses to the pre-test questionnaires taken several months earlier.

With half or less of the participating servers furnishing post-program reports, the representativeness of the results can be questioned. It is possible that those responding to the follow-up survey were more responsive to the effects of the program than those who were not heard from. Some insight into the representativeness of the post-program respondents can be gained by comparing their pre-test scores with those of the non-respondents. A comparison showed small and statistically non-significant differences between the respondents and non-respondents. While this result doesn't prove the representativeness of the responding sample, it certainly supports it. So, too, does the fact that the failure to respond was most

often the result of job conditions and not the characteristics of the servers themselves.

Management Policy

The results obtained from the checklist of beverage service policies completed by managers are shown in Table 9.

TABLE 9

MEAN PRE AND POST SCORES ON SELF-REPORTS OF MANAGEMENT POLICIES

Time	Louisiana (N=21)		Michigan (N=9)	
	Mean	S.D.	Mean	S.D.
Pre	.538	.12	.489	.09
Post	.576	.13	.533	.09
Diff	.038		.083	

Policy changes follow changes in server practices to the extent that greater changes are reported by the Michigan participants. However, in the case of management policies, the changes in Michigan, as assessed by a 1-tailed correlated t-test, are statistically significant ($t=2.53$; $p=.04$), while those reported by the Louisiana managers were not significant ($t=1.32$; $p=.20$).

It is surprising to note that the scores were generally lower in Michigan than Lafayette, both before the program and afterward. However, many alcohol serving policies are a reflection of local custom, which often differ from one area to another. It is difficult to calculate what effect these differences in prevailing levels had upon the prospects for change. While the lower scores in Michigan left more room for improvement, they might also indicate lowered receptiveness to a program encouraging responsible alcohol service. Whatever the reason, what is important is that the program appears to have brought about a significant shift in policy among managers of Michigan establishments.

Knowledge and Opinion

The immediate objective of the program being evaluated was to modify those cognitive and motivational variables that lead to changes in behavior. Knowledge and opinion measures were developed and administered for the purpose of assessing those variables mediating between the program and the behavior. While behavioral changes were made in the ultimate criterion of program effectiveness, assessment of changes in knowledge and opinion were studied as a means of helping to interpret results obtained from administration of behavior measures.

Knowledge Measures

Of the 244 participants in the program, 215 (88%) completed both pre- and post-knowledge measures. The remainder either arrived too late or were forced to depart too early to complete both measures. Assessment of knowledge gains was confined to those participants taking both measures. The results obtained from administration of the knowledge measures appear in Table 10.

TABLE 10

MEAN PRE- AND POST-TEST KNOWLEDGE SCORES

Time	Louisiana N=120		Michigan (N=95)	
	Mean	S.D.	Mean	S.D.
Pre	6.35	1.53	6.24	1.42
Post	7.65	1.50	8.23	1.33
Diff	1.30		1.99	

Significant overall knowledge gains were obtained across the two sites ($F=130.9$; $p<.01$). The gains were also separately significant both in Louisiana ($t=3.71$; $p<.01$) and Michigan ($t=7.24$; $p<.01$). The knowledge gain in Michigan was half again as large as that evidenced in Louisiana (1.30 vs 1.99). This difference is significant as shown by a significant SITE x TIME interaction ($F=5.96$; $p=<.05$). The greater knowledge gain evidenced by the Michigan participants may have contributed to the differences in the apparent effect of the program upon server intervention across the two sites.

The correlation between pre- and post-tests was exactly the same, $r=.29$, at both sites. While this correlation is statistically significant ($p<.05$), it is rather low and indicates that the information gained differed substantially from one participant to the next.

The fact that pre- and post-tests consisted of different items prevents any pre-post comparisons at the item level. Pre-test results revealed that participants did not know the number of traffic deaths attributable to alcohol each year, the proportion of intoxicated drivers coming from bars, the first driving ability affected by alcohol, or the BAC at which a driver's judgment is affected.

The only items answered incorrectly by more than 30% of the participants on the post-tests were another item dealing with the BAC at which judgment is affected and an item dealing with the protection that dram shop laws actually offer to servers.

Opinion Measures

Of the 244 participants, 202 (83%) completed both pre and post opinion measures. The smaller numbers completing opinion measures, as opposed to the knowledge measures, is due to the exclusion of opinion measures for those participants who failed to answer one or more items, thus making the questionnaires unscoreable. (Such unanswered items were simply scored as "incorrect" for knowledge measures.)

Results obtained from administration of the opinion measures appear in Table 11.

TABLE 11

MEAN PRE- AND POST-TEST OPINION SCORES

Time	Louisiana (N=100		Michigan (N=84)	
	Mean	S.D.	Mean	S.D.
Pre	26.3	4.02	27.1	3.94
Post	28.8	3.77	29.8	3.70
Diff	2.6		2.7	

The results show a significant shift in the direction of more favorable attitude toward responsible alcohol service ($F=41.8$; $p=<.01$; see Appendix D-4). The changes were significant in both Louisiana ($t=7.31$; $p<.01$) and Michigan ($t=7.88$; $p<.010$). Opinions in Michigan were significantly more favorable than those in Louisiana both before and after the program ($F=5.27$; $p<.05$). However, unlike knowledge gains, opinion shifts did not differ from one site to the other, but were relatively constant across sites. Therefore, there is no evidence that shifts in opinion contributed to the greater intervention change in Michigan vs Louisiana.

Since the same opinion items were given in both pre- and post-tests, it is possible to identify the individual issue showing the greatest positive opinion change. These were:

- The effectiveness of offering food as a means of preventing over-drinking
- The effectiveness of getting patrons involved in activities as a means of slowing down alcohol consumption
- The importance of servers bearing in mind the possibility that an impaired patron might be involved in an automobile accident
- The joint responsibility of drinking establishment and patron for any accidents involving the public
- The validity of suspending an establishment's license as a means of enforcing liquor control laws.

The correlation between pre- and post-measures of opinion were .60 and .67 for Louisiana and Michigan, respectively, meaning that shifts in opinion are more uniform across participants than are knowledge gains.

Oklahoma Evaluation

One of the communities considered as a possible field test site was Oklahoma City. It was not selected as a site because of its lack of either a statutory or judicial dram shop law. Without the incentive to responsible alcohol service supplied by these laws, the prospects for significant change were not sufficient to justify the expense involved in carrying out a field test.

The major cost item in the field test was the observations of server responses to simulated impairment by project staff. The costs involved in adminstration of the paper-pencil knowledge, opinion, and self-report measures were negligible since administration of these measures was handled by the sponsoring agency and not supported by project funds. The opportunity to find out what effect the program might have in a jurisdiction lacking any dram shop laws was considered worth the small investment involved in an evaluation using only the paper-pencil measures.

With the aid of the State liquor control agency, the course was advertised among local establishments. A limited number of classes were offered, to be taught by a representative of the project. No effort was made to train local personnel as instructors. Otherwise, the administration of classes and paper-pencil measures followed the pattern employed in the field test.

A total of 52 servers and 39 managers representing 21 establishments participated in the Oklahoma program. This unexpectedly high response is attributed not so much to interest in responsible alcohol service, but to curiosity about Oklahoma liquor laws, which had recently undergone sweeping changes.

Because of the difficulties encountered in getting followup practices and policies questionnaires to participants through establishments in Louisiana and Michigan, home addresses of participants were obtained during the program and post-program policies and practices questionnaires were sent directly to those addresses. Thirty-one percent of all servers and 51% of managers returned completed questionnaires.

The results obtained from administration of knowledge, opinion, and self-reports of policies and practices are summarized in Table 12.

TABLE 12

PRE AND POST KNOWLEDGE, OPINION, AND SELF REPORT PRACTICES/POLICIES MEANS FOR OKLAHOMA PARTICIPANTS

Measure	Pre-Test Mean	Post-Test Mean	Diff.
Knowledge (N=80)	6.54	7.58	1.04
Opinion (N=61)	27.33	28.92	1.59
Self-Report Practices (N=20)	3.10	3.47	.37
Policies (N=16)	.55	.57	.03

All four measures show shifts in the desired direction. Differences achieved statistical significance for knowledge ($t=4.97$; $p<.01$), opinion ($t=4.28$; $p<.01$), and practices ($t=2.37$; $p=.03$). No significant difference was found for changes in policy ($t=1.45$; $p>.10$).

While gains materialized on three of the four measures in Oklahoma, they are notably smaller than those found in Michigan. Differences in gains are statistically significant in the case of knowledges ($t=3.49$; $p<.01$), opinions ($t=2.12$; $p=.04$), server practices ($t=2.75$; $p=.04$), and policies ($t=2.95$; $p<.01$). When compared with Louisiana results, the gains in Oklahoma were much more similar. Louisiana showed greater gains in the case of opinion measures ($t=2.72$; $p<.01$). However, differences were non-significant in the case of knowledge gains ($t=.236$; $p>.10$), changes in practices ($t=.41$; $p>.10$), and policy changes ($t=.22$; $p>.01$). It is apparent that Oklahoma followed more closely the changes in Louisiana than they did those in Michigan.

Intervention by Type of Clientele

The results presented up to the present point have dealt with changes in the knowledge, opinions, and behavior of servers and managers as a result of their participation in the program of responsible alcohol service. There is one additional noteworthy result totally unconnected with the program being evaluated, namely, the relationship between the actions of servers and the characteristics of the clientele they served.

Classification

Establishments in both Louisiana and Michigan were classified according to the type of clientele they served using the following system:

> Affluent--A high-priced restaurant, catering to an affluent clientele (N=34).

Yuppie--An establishment featuring moderate prices along with a layout and atmosphere intended to promote interaction and attract a young, professional crowd (N=22).

All--An establishment designed to attract all categories of clientele (N=7).

Blue Collar--The small tavern designed to attract blue collar workers and people from the immediate neighborhood (N=24).

College--An establishment located near a university, and is catering almost entirely to a college crowd (N=16).

Michigan had a somewhat greater number of establishments catering to an Affluent clientele (13 vs 9) and fewer catering to a Yuppie clientele (12 vs 19). Numbers in the other categories were almost identical.

Intervention Levels

Table 13 displays the frequency of intervention by category of clientele. In the table, intervention is classified by the same three categories defined "intervention level:"

None--Service without intervention

Partial--Service with some form of intervention

Full--Total intervention; no service.

TABLE 13

FREQUENCY OF OBSERVATIONS CLASSIFIED BY LEVEL OF INTERVENTION AND TYPE OF CLIENTELE (COMBINED PRE/POST IN LOUISIANA AND MICHIGAN)

		Intervention			
Clientele	Visits	None	Partial	Full	Total
Affluent	254	77.0%	17.1%	5.9%	100%
Yuppie	174	87.0%	9.5%	3.5%	100%
All	60	83.3%	15.0%	1.7%	100%
Blue Collar	181	90.6%	7.7%	1.7%	100%
College	124	96.8%	2.4%	.8%	100%

Results are certainly compatible with expectation. The establishments in which intervention is most likely to take place are those in which intoxicated patrons are least likely to be welcome, namely, those that cater

to a relatively affluent, generally well-behaved crowd. The relationship between clientele and intervention level is statistically highly significant ($X^2 = 35.4$; $p<.001$)

DISCUSSION

The results obtained from the field test are somewhat equivocal. Significant changes in intervention were observed in Michigan but not in Louisiana. While differences in levels of participation and in levels of business account for some of the changes in intervention, significant increases in intervention remain after the effects of these factors have been controlled statistically. Changes in observed intervention in Michigan were paralleled by the self-reports of servers. The inconsistency between observed and self-reported intervention does not necessarily mean either measure of intervention is incorrect. The measures differ in at least two respects:

> Period of Time--The self-reports summarized behavior over two months while observations represent four individual occurrences.
>
> Nature of Intervention--The behavior observed was that of servers in response to requests for another drink by an apparently intoxicated patron, while reported behavior involved a broad range of intervention activities.

There's no reason to doubt the claims of servers in either State that their participation in the program altered their behavior with respect to intervention. However, it appears that only in Michigan did those changes involve responses to intoxicated drivers in general, and terminating service to such drivers in particular.

Site Differences

The differences between Louisiana and Michigan in responding to apparently intoxicated patrons are not readily attributed to what the two groups learned. Both evidenced significant knowledge gains and shifts toward more favorable opinions. While the knowledge gains were significantly higher in Michigan, the difference between the two sites was not of sufficient magnitude to account for the large differences in intervention.

More revealing is the difference in reported policy changes, where significant shifts toward more favorable policies were reported in Michigan but not in Louisiana. While the policies reported upon involved other aspects of responsible alcohol service than intervening with intoxicated patrons, it seems likely that management's policy toward intervention is a reflection of its overall policy toward responsible alcohol service. It is also likely that servers' practices are strongly influenced by their perception of management's policies.

The policy differences suggest that the differences in observed intervention by Louisiana and Michigan servers may then be to some extent a

result of differences in the receptivity of management to server intervention rather than differences in the servers themselves. If this explanation is correct, it then raises the question as to why management's response to the program in the two jurisdictions should differ so widely.

One possible explanation for the results is the differences in dram shop laws. In Michigan, third party recovery from establishments serving alcohol to intoxicated patrons is expressly permitted from the state dram shop law. That law was given considerable emphasis in the server education program and it was evident that action under that law was of considerable concern to both servers and managers. In Louisiana, however, there is no dram shop statute, only precedent under common law. This law is less clearcut, allowing recovery only if the establishment is negligent in allowing service where injury could be reasonably foreseen. While managers were very much concerned about dram shop liability as a concept, they didn't appear to be threatened by the prospect of a law suit against them. The fact that results from Oklahoma (no dram shop) paralleled those from Louisiana give support to the idea that lack of dram shop laws contributes to lack of change in intervention.

There are, of course, differences between Louisiana and Michigan beyond the nature of dram shop law. Louisiana has a tradition of both heavy and relatively unregulated drinking. It is not a coincidence that Louisiana is one of the few States that, at this writing, has rejected attempts to raise the legal drinking age to 21. It is also one of few States where "take out" drinks are legal. Michigan, by contrast, is far more accepting of alcohol control. It was one of the first States to raise its legal drinking age. Its dram shop law, one of the country's strongest, is a reflection of its willingness to control the sale and service of alcohol.

Magnitude of Change

While the program of responsible alcohol service appears to have been effective in bringing about significant increases in intervention within Michigan, the changes were very small. What is most striking about the change in Michigan is its small magnitude. Establishments that had participated in the Program of Responsible Alcohol Service served all but 16% of "patrons" (i.e., observers) who were exhibiting visible signs of apparent intoxication. It is worth emphasizing that the visible signs that were exhibited were not at all subtle. Individuals unconnected with the project who were given an opportunity to view the videotapes used in training the observers had no reservation in declaring that the observers appeared to be intoxicated. And there is every reason to believe that they appeared to be intoxicated to those who served them. None of the servers voiced any suspicions tnat any of the patrons they had served in recent weeks were pretending to be intoxicated. Such suspicions, had they existed, are almost certain to have been voiced by someone when intoxication was being discussed during the program (following the baseline data collection).

The small amount of change in intervention reflects the effects of the concerns that determine a server's behavior. These concerns include:

Profit--Servers are under pressure to promote sales in general and the sale of alcohol (because of its mark-up) in particular.

Tab--Most of the servers' income derives from tips, which are tied to the size of the tab.

Good Will--Termination of service to a patron may result in loss of good will and the possible loss of a tip and long-term patronage.

Hospitality--The orientation of the hospitality industry is to see that patrons get what they ask for.

Against these incentives to serve alcohol without limit are no really strong disincentives.

While service of alcohol to intoxicated patrons is against the law in almost every jurisdiction within the United States, there are rarely any prosecutions for violation of it. Proving that a patron is intoxicated is a lot more difficult than proving other liquor violations, such as those concerned with service to under-age patrons, hours of operation, taxes, or the proportion of liquor revenues. Law suits are a remote threat and are covered by insurance.

The Importance of Management Support

It should be evident from the results of the present study that server education, by itself, is very limited in its ability to bring about change in the responsibility of alcohol service. It can only enable servers to perform responsibly; it cannot motivate them to do so. It is, therefore, only likely to be effective when it is accompanied by management policies that will induce servers to put into practice what they have learned.

While the need to back up the education of servers with strong, clearly ennunciated, and rigorously enforced policies may seem axiomatic, it is a need that seems to be rarely fulfilled. Participants in the Program of Responsible Alcohol Service, who are probably among the more responsible representatives of the hospitality industry, were hard pressed to recall any instance in which an employee had been fired for serving an intoxicated patron. On the other hand, several recalled instances of employees being terminated for refusing to serve an intoxicated patron, and many more had themselves been threatened with termination for the same reason.

Unfortunately, rather than attempting to reinforce server education through its alcohol service policies, there has been a tendency on the part of management to trade server education off against management responsibility. This effort has taken several forms. One has been the offer of support to laws requiring server education in return for a reduction of establishment liability. In one state, the passage of server education law was part of a bill placing a financial limit on recovery under dram shop suits. Another trade-off is the attempt to use server education as a defense against dram shop recovery. While an establishment's providing

server education at its own expense might be evidence of "good faith," it is illogical to offer it as a defense in a damage suit where it is obvious the program did not succeed.

The importance of management support in obtaining responsible alcohol service is apparent in recent server education research completed after the present study was initiated. Geller (1986) found significant but very small increases in intervention among servers participating in a server education program given at two Virginia restaurants. The level of change was similar to that found in the present study, although the forms of intervention studied did not include actual termination of service.

A much greater change in intervention was observed by Saltz (1987) in modifying the behavior of servers in a Naval Enlisted club. A major difference between the Salz study on one hand, and both the present study and the study by Geller on the other hand, was the ability of the Salz study to bring about major changes in policy and to ensure that changes were complied with. Unlike an Officers club, the restaurants in Louisiana, Michigan, Oklahoma, and Virginia could not be "commanded" to change their food and beverage policies, shorten hours of service, or to terminate servers who provided drinks to intoxicated patrons.

Conclusions

The following conclusions may be offered on the basis of the information gained in the present study:

1. On the basis of paper-pencil measures administered prior to and following instruction, it may be concluded that server education programs are capable of improving knowledge of, and attitudes toward, responsible alcohol service on the part of servers and managers.

2. Observations of server and manager behavior in response to simulated signs of intoxication showed that server education programs can bring about small but significant increases in intervention. However, the occurrence of such changes at one site and not at another indicate that the likelihood and magnitude of changes in intervention depend upon situational variables.

3. The fact that increased intervention occurred only where there were significant changes in observed intervention and accompanied by changes in self-reported management policies suggests that strong management support is needed to bring about intervention by servers. Changes in management policy toward alcohol service appear to be small in magnitude and limited in the conditions under which they occurred.

4. The likelihood of intervention with intoxicated patrons is greatest in establishments catering to a relatively affluent, adult clientele and under relatively low levels of business volume.

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APPENDIX A

INSTRUCTIONAL OBJECTIVES

PERFORMANCE OBJECTIVES

Servers and managers will:

1. Participate actively in server education.
2. Apply the results of server education to achieving responsible alcohol service in their establishments.
3. Prevent patrons from becoming intoxicated by regulating service of alcohol and encouraging alternatives to drinking.
4. Terminate service to intoxicated patrons.
5. Prevent intoxicated patrons from driving.
6. Prevent intoxicated patrons from injuring themselves or others.

Managers will:

1. Support programs of responsible alcohol service.
2. Develop effective strategies for intervening in their patrons' drinking and driving.
3. Provide transportation to intoxicated patrons.
4. Institute practices for responsible serving of alcohol, including checking I.D.s, establishing hours of service and intervening in drinking and driving.
5. Establish responsible marketing practices, including promoting food and non-alcoholic beverages, activities that discourage excessive drinking, and not promoting those that encourage excessive drinking.
6. Institute personnel management practices to foster responsible alcohol service, including supervision of servers and supporting server intervention.

KNOWLEDGE OBJECTIVES

Servers and managers will know, in addition to procedures for meeting performance objectives, the following:

1. The importance of responsible alcohol service to the welfare of the public as well as to servers, managers and owners in establishments serving alcohol.

2. What constitutes a program of responsible alcohol service.

3. The nature and magnitude of highway accidents and injuries resulting from drinking and driving.

4. State and local laws relating to the service of alcohol.

5. Employer policy concerning the service of alcohol.

6. The liability of drinking establishments for injuries and property damage resulting from risks to intoxicated patrons.

7. The importance of early server intervention in preventing patrons from overdrinking.

8. Methods for slowing alcohol service to customers who are showing signs of overdrinking.

9. Methods of getting patrons to accept alternatives to alcohol, including non-alcoholic beverages, food, and participation in activities.

10. The importance of leaving the initiative in the purchase of alcoholic beverages entirely to patrons (i.e., not pushing drinks).

11. Techniques for terminating service to patrons.

12. Techniques for deterring intoxicated patrons from driving.

13. The legal and moral responsibilities to prevent patrons from becoming intoxicated, and to prevent intoxicated patrons from driving.

14. Transportation and accommodations available to intoxicated patrons.

ATTITUDE OBJECTIVES

Servers and managers will believe that:

1. Servers, managers and owners have an obligation to provide responsible alcohol service.

2. Active participation in a training program is an important step in achieving responsible alcohol service.

3. Drinking and driving accidents are serious but preventable.

4. Intoxication can seriously degrade the ability to drive a vehicle safely.

5. Server/Managers and drinking establishments have a moral and professional responsibility to keep patrons from becoming intoxicated and prevent intoxicated patrons from attempting to drive.

6. Drinking establishments face severe financial loss, possible ruin, from serving intoxicated patrons.

7. Responsible alcohol service is not deleterious to good customer relations, and can actually enhance it.

8. Servers are responsible for seeing to it that patrons do not become intoxicated through their service of alcohol.

9. It is possible to intervene in drinking to prevent intoxication without antagonizing patrons or risking the loss of tips.

10. The earlier the servers intervene, the more successful will be the intervention.

11. They have the moral and legal obligation to terminate service to intoxicated patrons and to prevent intoxicated patrons from attempting to drive.

12. Their efforts to intervene in the drinking and driving of patrons will be successful.

13. Intoxicated patrons will resist attempts to terminate service and to prevent them from driving.

14. Intervention in the drinking and driving of intoxicated patrons is a sign of "professionalism" in management of alcohol services.

SKILL OBJECTIVES

Managers and servers will possess the decision making skills needed to select intervention techniques appropriate to any drinking situation.

Managers will possess the social skills needed to terminate service to intoxicated patrons and to prevent intoxicated patrons from driving.

APPENDIX B

PARTICIPANT COMMENTS

GENERAL COMMENTS

A number of general comments concerned characteristics of the audiovisual presentation that related to the slide-cassette form used in the pilot test (e.g., the inability to show signs of intoxication that involved motion). Despite explanations that the slide-cassette version would be replaced by a video, many participants directed their comments at the slides.

The one general comment that revealed a true deficiency in the program concerned the manner in which information was presented. The initial audiovisual presentations were confined to sets of scenes in which various aspects of responsible alcohol service were portrayed. This was to be followed by an instructor-led discussion about what was observed and the implications for responsible alcohol service. The discussion was intended both to, (1) communicate, through a process of discovery, information about responsible alcohol service and (2) help participants to work out strategies achieving responsible alcohol service. The approach fell short in several ways:

1. Separating the presentation of information from the illustrative scenes was awkward and made the information presentation unnecessarily dull.

2. Leading participants to the "discovery" of responsible alcohol service strategies through discussion required too much time, causing participants to become impatient and limiting the amount of material that could be handled within the amount of time available.

3. Having the information presentation handled by instructors demanded alcohol knowledge and teaching skills that might not always be available, thus inhibiting wide-scale implementation of the program.

After the first pilot test, the program was revised to incorporate the communication of information into the audiovisual presentation. As an interim step, a presentation consisting of text slides and a narrative audiotape were merely added after the scenes for each module. The second workshop was conducted using this format. By the third workshop, the information presentation had been integrated into the scenes, with text information being superimposed upon slides of the scenes. This integration of information and illustration was well received by participants.

The remaining comments will deal with individual modules.

Module I: Awareness

The first module appeared to fulfill its primary objective: introducing the program to its participants. The secondary objective--getting owners interested in sponsoring the program--could not be tested due to the absence of any conclave of owners at which the presentation could be shown.

The biggest problem with the module lay in the discussion that followed the AV presentation. In its original form, the discussion allowed participants to air their views on the various issues raised during the presentation. Discussion evoked during the first pilot consumed approximately two nours, and could have taken even longer. In order to avoid lengthy discussion, most of which was more appropriate to other modules, the format was changed to encourage participants to voice their concerns but not to engage in a discussion of them.

At first glance, a discussion in which issues are raised and not resolved might seem less than fulfilling. However, it succeeded very well in (1) "breaking the ice" for discussions, (2) helping to generate interest in the program, and (3) raising points that could be used by the instructor to initiate discussion in later modules. The revised module ended with assurance that each of the issues raised would be discussed and an invitation to participants to raise the issue again at the end of the meeting if the issue had not been fully discussed.

Module II: Need

The second module, "The Need for Responsible Alcohol Service," benefited more from the pilot test than did any other module. The objective of the module was to lead servers and managers to an acceptance of responsibility for preventing patrons from becoming intoxicated. The objective itself proved to be one of the most controversial aspects of the program. There was a very strong and obvious concern on the part of servers and managers that they were being held accountable for the consequences of irresponsibility on the part of drunk drivers. Prevailing sentiment was "Why don't they go after the drunks instead of us?" On many occasions, the fear was voiced that some patron who appeared perfectly sober would leave their establishment, be involved in an accident, show evidence of intoxication, and blame the establishment.

The various comments revealed a number of misconceptions concerning server liablility and other aspects of responsible alcohol service. Through discussion, the instructors attempted to establish the following points:

- *Server liability is not intended to protect drunks* but rather to compensate innocent third parties for damages suffered.
- Serving establishments are not held liable for the actions of drunks but rather their own actions in illegally serving minors or intoxicated patrons.
- Most state and local laws governing alcohol service only prohibit service to adults who are visibly intoxicated. In almost all damage awards, it was apparent that servers were aware of the patrons' intoxicated state and served them anyway.
- Because alcohol is a potentially dangerous drug, establishments must be licensed in order to sell it. The license carries with it a requirement to behave responsibly in dispensing alcohol. The parallel to a gun dealer was useful in getting this point across.

It was necessary to gain acceptance of these points in order to make participants receptive to the remainder of the program. Attempting to steer the discussion toward acceptance of the ideas enumerated proved to be an extremely formidable task--one that demanded extensive effort and did not always succeed.

A number of participants in the first two workshops pointed out the potential value of an AV presentation that would show a true case of injury resulting from irresponsible alcohol service. Approaches suggested included: (1) a server, manager, or owner whose establishment had been successfully sued for irresponsible alcohol service, or (2) someone who had been severely injured by a drunken driver illegally served.

The first alternative proved totally unfeasible. Servers who had been successfully sued were reluctant to admit culpability; most claimed not to remember the incident leading to the suit. On the other hand, the idea of interviewing a victim of an instance of irresponsible alcohol service proved quite feasible and led to a very effective presentation. The victim who volunteered to participate in the study was Ms. Kit Pardee, a 29-year-old quadriplegic whose injuries resulted from a collision with a drunk driver who had been overserved at a tavern moments before the accident. Several aspects of her case helped make for a very effective interview:

- The fact that she was a very attractive and athletic 25-year-old with a bright future at the time she was injured.
- The articulate straightforward manner in which she describes the accident and its aftermath without bitterness or other emotional reactions that might alienate the audience.
- The courage that is evident in her resolve to lead an active, fulfilling life despite a severe handicap.

The testimonial did not in itself overcome all of the concerns of servers or lead to universal acceptence of responsibility for preventing driving by drunken patrons. However, participants claimed that it was very effective in altering the way they thought about server responsibility in general, and server liability laws in particular. Together with the narrative, it helped them to clear up many of the misconceptions of the server points enumerated a moment ago.

In order to accommodate the testimonial, some of the content dealing with alcohol and its effects were eliminated from the presentation. When several of the participants in later workshops commented upon the paucity of basic alcohol and drinking/driving information, the content was restored.

Module III: Prevention

Initially, the content of this module was divided into two modules: Module 3: Signs of Intoxication, and Module 4: Server Intervention. Revisions resulting from the pilot test included changes in (1) signs of intoxication, (2) the distinction between server and manager intervention, and (3) prevention activities.

Signs of Intoxication

During the first two workshops, a full hour was devoted to signs of intoxication, including a 20-minute AV presentation and a 40-minute discussion. This much time could not be justified. Laws in most states and localities only require serving establishments to take action with respect to patrons who are visibly intoxicated (the language may vary from one jurisdiction to another, but that is the essence of it). One does not presumably require an hour's training for identifying signs that are "visible." It is, of course, quite possible for patrons to be intoxicated and not show it. However, servers were generally unwilling to terminate service unless the patron appeared to them to be clearly intoxicated.

While unwilling to terminate service on other than obvious signs of intoxication, most servers felt they should be cognizant of more subtle signs of impairment and take account of them in their dealings with patrons. While they might not be willing to terminate service on the basis of such signs, they would try to slow down service, encourage alternative low-/non-alcohol beverages, push food, and so on.

Unfortunately, there is no body of scientific data associating various aspects of behavior and physical appearance with corresponding alcohol levels. The best that could be done was to compile such anecdotal information as could be gleaned from the literature and that which was compiled during the workshops themselves. A number of the pilot test participants voiced the opinion that the information presented warranted neither an hour of time nor the implied importance of having a module devoted to the subject. Since recognizing signs of impairment was simply a step in preventing intoxication, it seemed logical to integrate it into other aspects of prevention.

Server vs. Manager Intervention

The original program structure distinguished two forms of intervention:

> Server Intervention--Intervention in drinking behavior to prevent patrons from becoming intoxicated.
>
> Manager Intervention--Intervention in the further drinking and in the driving of patrons who are intoxicated.

While participants accepted the distinction in levels of intervention, most considered it unnecessary and unwise to tie them specifically to servers and managers. Many managers are involved in intervention to prevent intoxication, while many servers are involved in intervention to prevent further drinking. It seemed better to distinguish the levels of intervention in terms of what they are rather than who does them. Accordingly, the title of the module was changed from "Server Intervention" to "Prevention", and "Manager Intervention" was made simply "Intervention".

Prevention Activity

Most of the prevention activities described in the audiovisual presentation, and discussed following the presentation, were well accepted by most of the servers and managers. Several objected, however, to the activities that required a lot of time, such as watching patrons closely, engaging in a conversation, or keeping track of drinks served. A common complaint was, "On a busy night, I have all I can do to keep up with orders!" It was obvious that many servers did not truly recognize that a license to serve alcohol carries with it a legal obligation to do so responsibly. This obligation is not something that can be set aside when an establishment is busy. In discussion, most could see the paradox involved in allowing the establishments that sold the most alcohol to be the least responsible. The audiovisual presentation was revised to give greater emphasis to the idea that preventing intoxication is no less important to the success of an establishment than alcohol sales.

There were a few situations depicted in the AV presentation that a substantial number of servers and managers viewed as unrealistic. An example was an instance in which a waitress encouraged two somewhat impaired patrons to dance as an alternative to continued drinking. The prevailing feeling was that, while such an approach might work with regulars, it would not be very realistic for most patrons. The scenes in question were deleted from the AV presentation and alternative approaches were added.

Module IV: Intervention

This module was intended to assist managers in developing strategies for intervening in the drinking and driving of intoxicated patrons. Originally, it was intended only for the instruction of managers. However, as noted in the discussion of Module III, "Prevention," the participants felt that it was unwise to let the distinction in server and manager roles dictate the content of instruction. In particular, they felt it was valuable for servers to at least become acquainted with, and discuss techniques for, intervention even if they did not participate in the more time-consuming role play activities that were originally a part of this module.

A number of suggestions were made as to techniques for dealing with an intoxicated patron. The content of the module was modified after each of the first three workshops, and again after the final workshop, to incorporate such suggestions.

There was only one issue that could not be resolved to the satisfaction of all participants. That issue was whether intoxicated patrons to whom service was to be terminated should be approached where they are or taken aside. Where only one or two patrons were involved, most agreed it was desirable to find some pretext to take the patrons aside where they would not be embarrassed, and where they would not disturb others should they become unruly. However, when groups were involved, opinions varied. The majority believed that it was more natural and more expeditious simply to approach the group and explain in a calm, friendly, but firm manner that service of alcohol could not be continued. On the other hand, a few felt that the chances of embarrassment and disturbance would be reduced if one person was taken aside first. The procedure recommended in the final form

that way, or for situations in which that is clearly the approach indicated.

Module V: Practice

This module is designed to give managers practice in applying the intervention procedures presented in the previous module. Practice was believed important in developing both skill and confidence in dealing with intoxicated patrons. However, it quickly became clear in the pilot test that very few managers perceived the need to develop further skill or confidence. Those who appeared to be unskilled or lacking in confidence, claimed that their problem lay in role playing rather than intervention.

Despite their lack of a self-perceived need for skill development, the participants engaged actively and enthusiastically in the exercises. However, it became apparent that they were getting as much out of the discussion which followed the role playing exercises as they did from the exercises themselves. Procedures were therefore revised to give considerably more time for discussion. This increase in discussion time reduced the number of cases that could be dealt with in the 90 minutes allocated.

In its original form, the Instructor Guide called for dividing the class into small groups of four or five participants each, in order to allow each participant to take part in at least two exercises. With the shift in focus from the development of skill to the development of strategy, it became more important to keep the group together in order to manage the discussion and in order for all participants to benefit from each other's contributions. It also became apparent that, if the entire group of servers and managers participating in the first four modules did not exceed the recommended class size of 25 participants, the group participating in the manager portion of the program should not, except under unusual circumstances, exceed 6-8 participants and therefore would not need to be subdivided.

Managers participating in the earlier pilot tests introduced several situations that were not covered by the original scenarios but which introduced novel strategy problems. These included:

- o "Open bar," in which patrons pay a fixed price which they generally believe entitles them to consume all they want.
- o A group that includes only one intoxicated patron and which could continue to be served so long as no one supplies drinks to that person.
- o An unruly group which includes one sober patron whose cooperation might be enlisted in transporting the others home, (including getting them to agree to leave).

Additional scenarios were created to deal with the situations.

While the written scenarios were well received and reviewed as a valuable part of the program, several participants felt that making the course totally dependent upon them had at least two drawbacks:

- The necessity of printing and distributing copies of all scenarios to all participants could discourage their use in some instances.

- The need to deal with novel situations that were not adequately handled by the printed scenarios.

To overcome these potential drawbacks, the Instructor Guide was revised to allow the scenarios to be presented orally as well as in written form. Instructors were encouraged to generate additional scenarios to deal with unique situations in their areas.

Module VI: Policy

The purpose of this module was to encourage and assist managers in formulating policy that would put into effect the various aspects of responsible alcohol service discussed in the preceding modules. In its initial form, this module was to consist of an information presentation on the subject of responsible alcohol policy. However, it quickly became apparent that there was little new information to present. The various policies dealt with procedures that had already been discussed in the Prevention Intervention modules. What remained was to encourage and help managers to make the procedures matters of policy.

After the first two workshops, the Instructor Guide was revised to call simply for a discussion of key policy changes necessitated by the modules discussed in earlier modules. The change in approach had the further advantage of maintaining the highly interactive instructional method that characterized the previous module (Practice), rather than returning to a lecture. It was very evident in the first two workshops that, having participated in the program for the entire day, and having been actively involved in the discussion of intervention strategies, participants were not receptive to a lecture as a means of ending the program.

APPENDIX C

STUDY OF BEHAVIOR OBSERVATION METHODS

The primary criterion of effectiveness employed in evaluating the program of Responsible Alcohol Service was observed changes in behavior involving the service of alcohol within establishments whose servers and managers participated in the program. This appendix describes a feasibility study that was undertaken in selecting the method to be employed.

ALTERNATIVE OBSERVATIONAL APPROACHES

Prior to initiating the field testing of the server education program, "Program of Responsible Alcohol Service", two alternative approaches to observation of server behavior were tried out and assessed. These were:

> True Impairment--Observation of server performance in response to frequently occurring patron behavior.
>
> Simulated Impairment--Observation of server responses to behavior "staged" by staff personnel posing as patrons.

The observations were carried out by members of the project staff in the Washington, D.C. area. The procedures used in, and results obtained from, application of each method are described in this appendix.

True Impairment offered the advantage of being an inherently valid criterion. The server behavior being observed is in response to the signs of impairment manifest by actual patrons. Questions concerning the feasibility of this criterion involve (1) how much observational time would be necessary to actually witness servers responding to impaired patrons, and (2) the ability of observers to truly witness the interaction between servers and patrons.

The advantage of Simulated Impairment was the ability to assure that each visit to an establishment would indeed result in an observation of server behavior as well as the ability to present a controlled set of impairment signs to servers. The primary disadvantage was the question of whether the signs of impairment exhibited by the observers were truly valid. If they were not, servers might respond to observers in ways that differed from their responses to actual patrons.

True Impairment

In True Impairment, members of the project staff entered bars and observed the behavior of servers in response to actual patrons.

Procedures

Two different procedures were used for collecting observations:

> Individual--The observers entered bars individually.

Paired--Observers entered bars in pairs.

In the individual observations, observers entered bars singly and selected a point where they could watch other patrons and their interactions with servers. Their job was to record, for each interaction, (1) the time when it occurred; (2) the patron and server involved; (3) the condition of the patron at the time; (4) how many of what kind of drinks were served; (5) the patron's request; and (6) the server's response. Observers recorded their observations in a prepared format.

Each observer pretended to be reading a textbook and taking notes from it. A system of coding tables, patrons, and servers was worked out in order to permit the maximum information to be recorded in the shortest time. This was necessary in order to (1) avoid diverting the observer's attention from patrons any more than necessary, and (2) avoid arousing suspicion.

A total of four hours of observation by each of two observers took place in this manner.

In paired observations, observers entered an establishment in pairs and sat across the table from one another. Each could observe half the room. Instead of writing down their observations, they recorded them orally on cassette recorders. They collected the same information as mentioned above. Concealed lapel mikes were used to allow words to be recorded without observers having to raise their voices.

Two alternative ways of activating the cassette were employed: (1) a remote switch concealed in the observer's sleeve; and (2) placing the cassette on the table and activating it in the normal manner. A coding system was developed for identifying patrons and servers. It was based upon location and observation of patrons, rather than an arbitrary numeric code, in order that the observer would not forget the code and accidentally misidentify patrons. Some six hours of observation by two observers took place using this approach.

Results

Results are summarized in the table below:

HOURS, DRINKS AND CONDITION OF FREELY-OBSERVED PATRONS, CLASSIFIED BY OBSERVATIONAL METHOD

Observ Method	Patrons Observ	Patron Hours	Drinks Consumed	Mean Drinks/ Hours	Max. Drinks/ Hours	Served While		Left While		Intervene	
						Imp	Intox	Imp	Intox	Drnk	Driv
Indiv	36	74	66	.9	3	6	1	7	1	0	0
Paired	61	102	86	.8	2	5	1	7	2	0	0

It is interesting to note that not one intervention occurred. Some 11 patrons were served while impaired and two while intoxicated without any effort on the part of servers to deter further drinking. While this result is interesting, it is not really germane to the objective of the study, which was to assess the feasibility of methods rather than study intervention behavior.

The most disappointing statistic is the small number of patrons who were observed intoxicated. While three patrons may be three too many for the safety of the public, it is a rather small number for six hours of observation. One of the potential advantages of using True Impairment was the possibility of observing more intervention opportunities than could be staged. Despite the fact that the bars selected for observation were chosen for the high level of drinking that characterized them, only three out of 97 patrons were observed to be intoxicated.

Another limitation of using the True Impairment method was the inability to overhear conversations between servers and patrons well enough to detect subtle forms of intervention. While it would have been easy to tell whether service to an intoxicated patron had been terminated, it would have been difficult to detect the more subtle forms of intervention, such as suggesting food, coffee, or non-alcoholic beverages. The ability to detect subtle forms of intervention is particularly important given the relatively low level of alcohol consumption that was observed--an average of less than one drink an hour. Of course, the average included a number of people who drank at a very slow rate, primarily women. However, of the 97 drinkers, only one surpassed 2 drinks an hour, and that rate was only maintained for an hour. The point is that, if servers were doing what they are supposed to and attempting to deter impaired patrons from further consumption by offering alternatives, etc., it would have been difficult to detect.

Any fears concerning the obtrusiveness of observers under this method of observation proved to be unwarranted. In the case of the individual observations, only one patron paid any attention to the observer, a woman who expressed interest in the nature of the exam for which the observer appeared to be studying. Similarly, in the paired observations, patrons seemed to assume the observers were talking to one another. This was helped by the observers' practice of looking at one another any time they spoke.

Simulated Impairment

Under the Simulated Impairment method, observers act out signs of impairment rather than simply witnessing them among patrons. The advantage is the ability to control the nature and number of situations to which servers are expected to respond.

For observational purposes, drinking situations were classified in terms of the patron's level of impairment and intent. The patron's level of impairment clearly influences intervention. For purposes of assessing intervention, two levels were employed:

- Affected--Patron is affected by alcohol but not legally intoxicated; rate of service should be reduced to prevent intoxication.
- Intoxicated--Patron is legally intoxicated; may not be served another drink or drive an automobile.

Whether the patron intends to drive, ride with someone else, walk, or remain in the establishment also influences server behavior. Legally, intent is not an issue; intoxicated patrons may not be served another drink regardless of their intent. However, as far as actual server behavior goes, patron intent is likely to play a part.

Various combinations of impairment level and intent led to the following set of five drinking situations:

Drinking Alone

1-1 Drinker is impaired and requests another drink.

1-2 Drinker is impaired and expresses an intention of becoming even more impaired when requesting another drink.

1-3 Drinker is intoxicated and requests another drink.

1-4 Drinker is intoxicated and requests another drink, indicating the intent to drive.

1-5 Drinker is intoxicated and prepares to leave the place indicating the intent to drive.

Drinker is Accompanied

2-1 Drinker is impaired and requests another drink indicating intent to drive later.

2-2 Drinker is intoxicated and requests another drink. Companion claims to be driving.

2-3 Drinker is intoxicated and requests another drink. If asked, companion is driving.

2-4 Drinker is intoxicated and requests another drink indicating intent to drive.

2-5 Drinker is intoxicated and prepares to leave indicating intent to drive.

All of the situations were capable of evoking a server response. Even patrons who are merely impaired should be encouraged to slow down drinking or accept alternatives in order to prevent them from becoming a problem later on. Whether intervention would actually occur was another matter. Yet, intervention at just such a level might prove to be the most sensitive index of the effectiveness of an intervention program. For this reason, situations calling for very subtle interventions were tested. If results showed that servers failed to respond to these situations, and acting out these situations was failing to provide any information of value, these situations could be dropped and observations confined to those situations more likely to evoke responses.

Procedure

A group of five observers was assigned the task of acting out the 10 situations listed earlier. Each observer was assigned one Unaccompanied and one Accompanied drinking situation. Each was to be acted out in three establishments. Bearing in mind the absence of intervention during the earlier free observations of True Impairment, the visits included drinking establishments having an announced policy of server intervention.

Results

None of the 30 visits resulted in any form of intervention. In one instance--situation 1-5--the observer was asked if he wanted to call a cab (the establishment didn't offer any assistance). When the observer declined, no further effort was made.

As with the study of True Impairment methods, the objective of the visits was to test the procedure, not the establishments visited. There is, of course, no way of determining just how successful the observers were in appearing to be "impaired" or "intoxicated". In the case of impairment, some of the signs were rather subtle, and might not have been detectable in a dimly lit, noisy drinking establishment. However, the signs of intoxication were chosen so as to be patently obvious. They included slurring of speech, stumbling, fumbling for change, elbows slipping off the table, trembling hands, and weaving across the floor (not all at once). In the view of the observers themselves, and those accompanying them, the behavior was clearly symptomatic of intoxication.

While the signs of impairment and intoxication that were acted out covered a wide range of behaviors, they excluded a number of signs that were difficult to stage for an evaluation of server behavior. These included:

> Physical symptoms--Signs such as perspiration, glazed eyes, flushed appearance, or other purely physical symptoms of intoxication.
>
> Social behavior--Signs that involve interaction with other patrons, including shouting, back slapping, arguing, abusive language.
>
> Potentially harmful--Signs that involve possible damage to the establishment or injury to the observer, such as dropping drinks, falling down, or being abusive or overly friendly with strangers.

Unfortunately, these signs are the ones most likely to evoke server intervention in that they are (1) most easily noticed, and (2) intervention helps to protect the establishment (as opposed to just the patron).

SUMMARY

As a result of this feasibility testing, it became apparent that neither method was entirely satisfactory. The True Impairment method suffered from great variability in the frequency of observed intoxication over place and time and the inability to reliably observe subtler forms of intervention. Simulated Impairment had the disadvantage of not being able to present some signs of intoxication most likely to lead to intervention.

Neither set of observations resulted in the observance of intervention taking place despite the fact that seven of the controlled observations took place in establishments that had announced policies of terminating service to intoxicated patrons. Unfortunately, the feasibility study provides no gauge of the extent to which intervention would occur within establishments whose servers and managers have participated in the program of responsible alcohol service being field tested.

The selection of an appropriate method of observation appeared to depend largely upon the extent of overdrinking within the establishments making up the experimental sample within the field test sites. If the establishments were characterized by a high level of overdrinking, the True Impairment method would be favored for the following reasons:

- Where there is a high frequency of overdrinking, True Impairment will produce enough opportunities for intervention to provide a reliable criterion without extensive and costly periods of observations.

- High frequencies of overdrinking tend to produce an atmosphere in which only the strong signs of intoxication occurring naturally are likely to be noticed and result in intervention.

- The inability to detect subtle forms of intervention is not a serious liability where there is a high incidence of intoxication.

- True Impairment is an inherently valid criterion, capable of providing more convincing evidence of the effectiveness of the program than is response to staged drinking situations.

The major disadvantage of the True Impairment method is that it does not permit assessment of more subtle, preventive forms of intervention with patrons who are impaired but not intoxicated. If the observations that took place during the feasibility testing are any indication, it is unlikely that servers in any of the high overdrinking establishments visited would intervene in the drinking of anyone who was not severely intoxicated--if at all.

The use of Simulated Impairment as a method of assessing intervention would seem most appropriate where many of the establishments making up the experimental sample are not characterized by a high incidence of obvious overdrinking. The fact that the establishments are chosen because of a high patron arrest rate doesn't necessarily mean that there will be high incidence of obvious intoxication. If there is not, it will be necessary to use the Simulated Impairment approach, calling upon observers to act out various levels of impairment. Visits to the establishments selected for the experimental sample revealed that only a few were characterized by a high level of overdrinking--principally college hangouts. Therefore, the method of Simulated Impairment was employed.

APPENDIX D
ANALYSIS OF VARIANCE FOR TABLES 5, 6, 7, AND 11

ANALYSIS OF VARIANCE FOR TABLE 5

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG. OF F
Main Effects	3.905	3	1.302	6.771	.000
GROUP (Exp. vs Control)	.564	1	.564	2.935	.087
TIME (Pre vs Post)	1.737	1	1.737	9.033	.003
SITE (Louisiana vs Michigan)	1.667	1	1.667	8.671	.003
Two-way Interaction	1.426	3	.475	2.472	.061
GROUP x TIME	.470	1	.470	2.446	.118
GROUP x SITE	.951	1	.951	4.948	.026
TIME x SITE	.018	1	.018	.096	.757
Three-way Interaction	1.063	1	1.063	5.529	.019
GROUP x TIME x SITE	1.063	1	1.063	5.529	.019
Explained	6.394	7	.913	4.751	.000
Residual	147.848	769	.192		
TOTAL	154.242	776	.199		

ANALYSIS OF VARIANCE FOR TABLE 6

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG. OF F
Main Effects	8.984	3	2.995	4.928	.002
GROUP (Exp. vs Control)	.622	1	.622	1.023	.312
TIME (Pre vs Post)	5.544	1	5.544	9.124	.003
SITE (Louisiana vs Michigan)	2.907	1	2.907	4.784	.029
Two-way Interaction	4.818	3	1.606	2.643	.048
PART X SITE	3.364	1	3.364	5.536	.019
PART X TIME	.333	1	.333	.547	.460
SITE X TIME	.991	1	.991	1.632	.202
Three-way Interaction	.502	1	.502	.826	.364
PART X SITE X TIME	.502	1	.502	.826	.364
Explained	14.305	7	2.044	3.363	.002
Residual	445.399	733	.608		
TOTAL	459.703	740	.621		

ANALYSIS OF VARIANCE FOR TABLE 7

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG. OF F
Covariates	.758	1	.758	4.281	.039
BUS (Level of Business)	.758	1	.758	4.281	.039
Main Effects	2.079	3	.693	3.913	.009
GROUP (Exp. vs Control)	.359	1	.359	2.025	.155
TIME (Pre vs Post)	.867	1	.867	4.895	.027
SITE (Louisiana vs Michigan)	.938	1	.938	5.294	.022
Two-way Interaction	.915	3	.305	1.722	.161
GROUP X TIME	.334	1	.334	1.886	.170
GROUP X SITE	.600	1	.600	3.386	.066
TIME X SITE	.000	1	.000	.002	.968
Three-way Interaction	.748	1	.748	4.221	.040
GROUP X TIME X SITE	.748	1	.748	4.221	.040
Explained	4.500	8	.562	3.176	.002
Residual	130.009	734	.177		
TOTAL	134.509	742	.181		

ANALYSIS OF VARIANCE FOR TABLE 11

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG. OF F
Main Effects	702.167	2	351.084	23.527	0.0
TIME (Pre vs Post)	623.481	1	623.481	41.781	.000
SITE (Louisiana vs Michigan)	78.686	1	78.686	5.273	.022
Two-way Interaction	.205	1	.205	.014	.907
TIME X SITE	.205	1	.205	.014	.907
Explained	702.372	3	234.124	15.689	0.0
Residual	5431.842	364	14.923		
TOTAL	6134.215	367	16.714		