

# Training Bar Personnel to Prevent Drunken Driving: A Field Evaluation

NASON W. RUSS, PHD, AND E. SCOTT GELLER, PHD

**Abstract:** The potential of a server intervention program to decrease the likelihood that a bar patron will leave a bar intoxicated was evaluated. Research assistants posing as regular patrons ("pseudopatrons") visited two bars where about half of the servers had received server intervention training. Pseudopatrons set the occasion for server intervention to occur by drinking six alcoholic beverages in two hours. The blood-alcohol concentration (BAC) of the pseudopatrons was measured after they left the bar. Results

revealed that trained servers initiated more server interventions than did untrained personnel. Moreover, pseudopatrons served by trained personnel reached substantially lower BACs than those served by untrained servers. These results suggest that, if implemented on a large scale, server intervention programs have the potential of reducing drunken driving by helping to decrease the exit BACs of bar patrons. (*Am J Public Health* 1987; 77:952-954.)

## Introduction

Even with stricter penalties and increased enforcement of anti-drunken driving legislation, alcohol-impaired driving continues to plague American society. Reviews of drunken driving countermeasures<sup>1,2</sup> have revealed that, although numerous approaches have been used to decreasing driving under the influence of alcohol (DUI), the effect of these interventions have, at best, been mild and transitory. For example, the deterrence effect of short-term, intensive roadside breath-testing campaigns does not persist after the roadblocks cease. Even when DUI arrestees are remanded to Alcohol Safety Action Programs, the likelihood of recidivism is high.<sup>2</sup> Attempts to intercept impaired individuals before they have the opportunity to DUI have also had limited success. Studies have shown that intoxicated individuals are unlikely to change their driving plans even after being informed that they are over the legal limit for driving.<sup>3\*</sup> The unwillingness of these patrons to alter their transportation plans may be due, in part, to alcohol-impaired judgment.

A potentially more effective approach to DUI prevention which is designed for use by waiters, waitresses, and bartenders is termed "server intervention". Mosher<sup>4</sup> described how DUI can be decreased through the use of techniques designed to prevent patrons from becoming intoxicated, not serving an already intoxicated or underaged patron, and providing a means whereby an alcohol-impaired individual can "sober up" before driving. In other words, servers of alcoholic beverages are trained to intervene throughout a patron's entire drinking bout, not just when they are about to leave an establishment.

Server intervention has become more than just a moral obligation for servers of alcohol. Both servers and the establishments in which they work have become targets of large DUI lawsuits. As a result, liability insurance premiums for alcohol-serving establishments have either sky-rocketed or are no longer available. Even hosts of private parties are being held legally responsible for guests who DUI and cause an accident. Thus, it is now critical for anyone who serves alcoholic beverages to monitor the level of intoxication and/or performance impairment of his or her patrons/guests.

In response to the need for server intervention in the prevention of DUI, a program entitled "Training for Intervention Procedures by Servers of Alcohol" (TIPS) was developed by Morris Chafetz,<sup>5</sup> a member of the Presidential Commission on Drunken Driving. In contrast to the popular conception that server intervention is simply "cutting off" an intoxicated patron, TIPS teaches that acceptable standards of practice for serving alcoholic beverages can be positive as well as preventive. As such, TIPS contains the critical elements which have been identified by Mosher<sup>4</sup> for successful server intervention training and is representative of server intervention programs in general. While these programs contain techniques which can ostensibly reduce DUI, their actual effectiveness remains to be evaluated systematically.

The purpose of this study was to assess the potential of server intervention to decrease DUI. This was done by comparing trained versus untrained servers with regard to the exit BACs of their patrons and their naturalistic interactions with excessive consumers of alcohol.

## Method

### Subjects and Setting

The subjects were 17 waiters and waitresses (i.e., "servers") employed at two local taverns. The seven males and 10 females constituted approximately 50 per cent of the serving staff at each bar. Reasons for non-participation included lack of interest in server training and schedule conflicts with the training sessions.

Prior to beginning data collection, the tavern owners and each server read and signed a consent form. The form made them aware of the provisions of the study, in particular, the "pseudopatron" component detailed below. They were informed that periodically throughout the study their verbal interactions with some patrons would be recorded on audio tape. The specific times that tapings were to occur were not discussed; however, the servers were requested to record the date, time, and description of any individual they suspected of being a pseudopatron.

### Server Intervention Training

The TIPS program was presented separately to the servers at each bar on consecutive weekends. The standardized program requires approximately six hours to teach and uses a combination of videotaped vignettes, leader-facilitated discussions, and server role-play segments. Servers are first taught the behavioral and physiological cues associated with alcohol's effects on the body, including lowered inhibitions, diminished judgment, slowed reactions, and impaired coordination. Next, servers are taught a variety of tactics for controlling the flow of alcohol, even from the first drink.

Address reprint requests to E. Scott Geller, PhD, Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.

\*Leland LS Jr, Russ NW: Tavern breath-testing: A review of its failure to prevent drunken driving. In: Geller ES (chair): Drunken Driving Prevention: Issues, Perspectives, and Future Directions. Symposium conducted at the meeting of the American Psychological Association, Washington, DC, 1986.

Techniques such as checking IDs to spot underage drinkers, offering food, serving non-alcoholic beverages, and stopping service are presented as ways to inhibit overindulgence, impede those approaching their limit, and deal with already intoxicated customers. Finally, servers are given a chance to perfect their skills in role-play situations. At the conclusion of the training session, all servers take a 40-question written test of which 70 per cent must be answered correctly to become a TIPS-certified server.

#### Pseudopatrons

Throughout the study, 26 male and six female research assistants posing as patrons (i.e., "pseudopatrons") visited participating bars on Thursday, Friday, and Saturday nights from 9:00 p.m. to 11:00 p.m. Pseudopatrons set the occasion for server intervention to occur by drinking three of their preferred alcoholic beverages per hour for two consecutive hours (i.e., approximately one drink every 20 minutes). This amount was chosen because a BAC Alert Systems nomogram (Rolling Meadows, IL) estimates that six drinks in two hours will cause individuals weighing 170 lbs or less to reach or exceed the legal limit of intoxication (.10 per cent). If a server intervened (e.g., by offering food), the pseudopatrons were instructed to react in a manner similar to their normal drinking behavior (e.g., ate only if hungry). Although the pseudopatrons were aware of the purpose of the study, they were blind to when server training occurred and which servers had been trained.

Each pseudopatron was accompanied by a confederate partner whose job it was to record unobtrusively all interactions between the server and pseudopatron on a concealed, 11 cm × 5 cm × 2 cm micro-cassette recorder (Dictaphone Model 3240). A 2 cm unidirectional microphone (Radio Shack Model 33-1052) was concealed inside the shirt collar of the partner and connected to the recorder by electrical wire. Every server-pseudopatron interaction was recorded by activating the device each time the server approached the table. Since ambient noise sometimes made a server's comments unclear, the partner re-activated the recorder and echoed the verbal interaction after a server left the table.

In order to make the partners less obtrusive within the drinking situation, they were allowed to "nurse" one drink during the two hour observation period. This disparity in the number of drinks consumed between pseudopatrons and their partners is consistent with frequent naturalistic observations of rate and amount of alcohol consumed between pairs of college drinkers.<sup>6</sup>

At the end of the data collection period, the pseudopatron-partner pair left the tavern and met with the first author who obtained the pseudopatron's BAC, using an Alcosensor Model III (Intoximeters, St. Louis, MO). The partner then provided the pseudopatron with a ride home.

#### Results

All 17 servers who participated in the TIPS training passed the 40-item certification examination; the average score was 87.7 per cent correct. A workshop evaluation form completed by each participant indicated consistently favorable opinions of the training.

Throughout the study, 32 research assistants posed as pseudopatrons on 49 occasions: 24 before training and 25 after training. Before training, servers who would later be trained were not distinguished from those who remained untrained. Therefore, the behaviors of all servers were examined as a group during the 24 pseudopatron visits before training. For the

25 pseudopatron excursions after training, the behaviors of 16 "trained" and nine "untrained" servers were compared.

Six servers reported that they had served at least one pseudopatron during the data collection period. None of these sightings were correct, however, suggesting that the servers treated the "real" pseudopatrons no differently than true patrons.

#### Intervention Analysis

After all pseudopatron data were collected, two research assistants, blind to the pre- or post-training condition, listened independently to the tapes made by the partners. To assist them in recognizing server intervention, both research assistants received the educational and skills components of TIPS training, excluding the role-play segment. Interrater reliability, calculated by multiplying the ratio of agreements to agreements plus disagreements by 100 per cent, was 98.5 per cent for specific incidences of server intervention.

The overall analysis of variance (ANOVA) for frequency of intervention as a function of three conditions (pre-training, untrained servers, trained servers) by six consecutive drinks revealed only a main effect of condition. Neither the within group nor interaction terms were significant (data available on request from the second author).

From Figure 1, it can be seen that the average number of interventions implemented prior to training was approximately equal to those of untrained servers during the post training period. In contrast, a U-shaped function across the six drinks was found for the mean number of interventions by trained servers. Every trained server is represented in this figure, as they all performed at least one intervention.

The specific types of interventions implemented by each group of servers are given in Table 1. The earliest interventions by trained servers took the form of checking identification cards and offering food or water. Interventions at the fourth, fifth, and sixth drinks consisted of offering food or water; delaying service (e.g., offering to refill the partner's non-alcoholic beverage but not offering to get the pseudopatron a new alcoholic drink); and making driving-related comments (e.g., asking if the partner was driving).

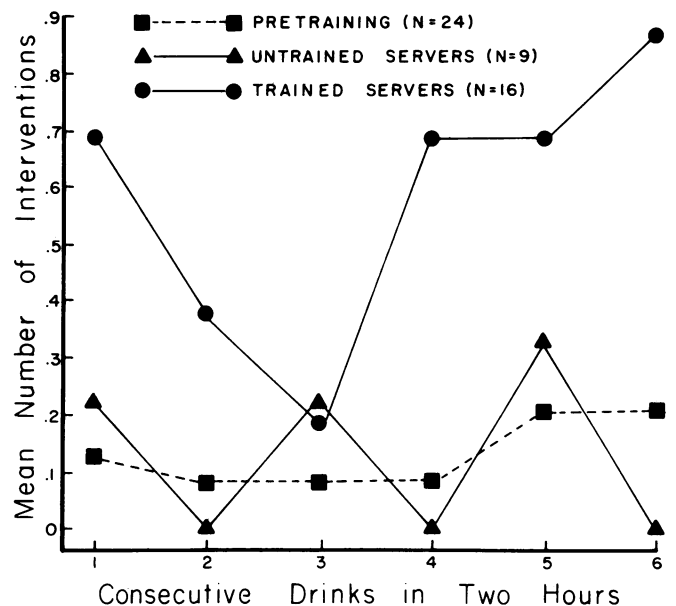


FIGURE 1—Mean Number of Interventions by Beverage Servers for Consecutive Drinks in Two Hours

**TABLE 1—Type and Frequency of Server Interventions for Each Group by Number of Drink**

Intervention	Server		
	Baseline	Untrained	Trained
<b>Drink #1</b>			
Checked ID	2	1	5
Offered food or water	1	1	3
Delayed service	0	0	2
Explained a house policy	0	0	1
<b>Drink #2</b>			
Checked ID	0	0	1
Offered food or water	0	0	2
Delayed service	0	0	2
Commented on quantity/speed of consumption	1	0	1
Made driving-related comment	1	0	0
<b>Drink #3</b>			
Offered food or water	1	0	1
Delayed service	0	1	1
Commented on quantity/speed of consumption	1	1	1
<b>Drink #4</b>			
Offered food or water	0	0	4
Delayed service	1	0	4
Made driving-related comment	0	0	3
Explained a house policy	1	0	0
<b>Drink #5</b>			
Offered food or water	0	0	4
Delayed service	1	1	1
Commented on quantity/speed of consumption	1	0	2
Made driving-related comment	3	2	4
<b>Drink #6</b>			
Offered food or water	0	0	4
Delayed service	1	0	0
Commented on quantity/speed of consumption	0	0	2
Explained a house policy	0	0	1
Made driving-related comment	3	0	5
Put less alcohol in drink	0	0	1

**Exit BACs of Pseudopatrons**

An ANOVA was conducted between the exit BACs of pseudopatrons from each bar during pre-training. Since no difference was found between the two sites, the data were collapsed across bars. The average pre-training BAC of pseudopatrons was  $.096 \pm .028$ , 63 per cent (n = 15) having BACs between .050 and .099 (i.e., were "impaired") and 37 per cent (n = 9) leaving the bar legally drunk (i.e., BAC  $\geq .10$ ).

No differences were observed in a comparison of the exit BACs of pseudopatrons served during pre-training and those served by untrained servers. The average exit BAC for pseudopatrons served by servers who remained untrained was  $.103 \pm .033$ , with just under 45 per cent (n = 4) at or exceeding the legal limit of intoxication. In contrast, those pseudopatrons served by trained personnel had an average BAC of  $.059 \pm .019$  and no pseudopatron in this group (n = 16) achieved the legal limit of intoxication, seven pseudopatrons had BACs less than .049, and nine were impaired (i.e., BACs between .050 and .099). The mean difference in exit BACs between pseudopatrons served by

trained vs. untrained servers was .044 (95 per cent confidence intervals .022, .066).

*Discussion*

Using pseudopatrons to assess the impact of server intervention training, the present study demonstrated that servers who received TIPS training initiated substantially more interventions than did untrained personnel. Furthermore, pseudopatrons served by the trained personnel reached substantially lower BAC levels than those pseudopatrons served by untrained servers.

Given appropriate contingencies to motivate server's behavior, server intervention can provide waiters, waitresses, and bartenders with skills necessary to control the flow of alcohol, thereby decreasing their patrons' BACs. As Mosher<sup>4</sup> warned, however, it is likely that servers will not engage in server intervention unless management, peers, and customers support such interventions. In the current study, pseudopatrons may have reacted more favorably to interventions than the average bar patron. These positive responses probably reinforced the server's efforts and encouraged subsequent intervention. Therefore, the striking impact of TIPS training on pseudopatron's BACs may be less dramatic per individual when applied on a larger scale.

As described by Waller,<sup>7</sup> outdated state liquor control laws, currently in effect, currently allow servers of alcohol to promote DUI by continuing to serve patrons well after they are capable of driving safely. Our results support the efficacy of training and motivating all servers of alcohol to intervene to prevent DUI. Mandated server training for all persons who serve alcoholic beverages or who hold licenses has already been adopted in Oregon and similar bills have been considered in Massachusetts, Michigan, California, and Hawaii.<sup>8</sup> While mandated vs. voluntary training is a policy issue beyond the scope of this article, the results of this study do suggest that if server intervention occurs on a large scale, the number of innocent victims in drunken driving crashes will surely decrease, thereby averting death, injury, arrest, and the intense emotional pain caused by unnecessary alcohol-related accidents.

**ACKNOWLEDGMENTS**

This study was supported by the General Motors Corporation; Sigma Xi-The Scientific Research Society; and SPSSI-The Society for the Psychological Study of Social Issues. The authors express their thanks to Dr. Morris Chafetz and William Delphos of the Health Education Foundation and Health Communications Inc., for providing the necessary training materials. The authors also gratefully acknowledge Galen R. Lehman for his comments on an earlier version of this manuscript. This study fulfilled the doctoral dissertation requirement of the first author under the direction of the second author. Portions of this paper were presented at the 1986 American Psychological Association Meeting in Washington, DC.

**REFERENCES**

- Ross HL: Detering the Drinking Driver. Lexington, Massachusetts: Lexington Books, 1982.
- Russ NW, Geller ES: Changing the behavior of the drunk driver: Current status and future directions. *Psychol Doc* 1985; 15:24.
- Meier SE, Brigham TA, Handel G: Effects of feedback on legally intoxicated drivers. *J Stud Alcohol* 1984; 45:528-533.
- Mosher JF: Server intervention: A new approach for preventing drinking driving. *Accid Anal Prev* 1983; 15:483-497.
- Chafetz ME: Training in intervention procedures: A prevention program. *Abstr Rev Alcohol Driv* 1984; 5:17-19.
- Geller ES, Russ NW, Altomari MG: Naturalistic observations of beer drinking among college students. *J Appl Behav Anal* 1986; 19:391-396.
- Waller JA: State liquor laws as enablers for impaired driving and other impaired behaviors. *Am J Public Health* 1986; 76:787-792.
- Saltz RF: Server intervention: Conceptual overview and current developments. *Alcohol Drugs Driv: Abst Rev* 1985; 1:1-13.