



U.S. Department
of Transportation

National Highway
Traffic Safety
Administration

TRAFFIC TECH

Technology Transfer Series



DOT HS 812 416

May 2017

Evaluation of Responsible Beverage Service to Reduce Impaired Driving by 21- to 34-Year-Old Drivers

Introduction and Overview

Young adult drivers 21 to 34 years old are a particularly high-risk group for impaired-driving-related crashes. Numerous studies have found that approximately half of intoxicated drivers had their last drink at a licensed bar or restaurant, and the most significant risk factors associated with drinking and driving were the amount of alcohol consumed and whether obviously intoxicated customers continued to be served.

In a systematic review of interventions designed to reduce alcohol use and its related harms in drinking environments, results of the studies indicated that responsible beverage service (RBS) training and follow-up enforcement and/or monitoring could be effective tools in lowering the rates of high-risk alcohol consumption and impaired driving. Some of the results suggest that RBS training can be effective as one aspect of a multi-component intervention.

The objective of this study was to implement and evaluate a multi-faceted intervention that integrated outreach and responsible beverage service training, targeted enforcement, and corrective actions by an enforcement agency to a random sample of identified problem bars. The goal of the RBS/enforcement program—through training and enforcement—was to reduce the practices of over-serving and serving obviously intoxicated individuals in bars and restaurants. The long-term goal of the program was to reduce driving-while-intoxicated (DWI) arrests and impaired-driving-related traffic crashes involving 21- to 34-year-olds.

Methods

The intervention was conducted from January through October 2009. Two communities participated in this demonstration and evaluation: Monroe County, New York, and Cleveland, Ohio. The basic design for the evaluation involved implementing the RBS/enhanced enforcement program at a random sample of problem establishments, which were identified based on indicators of over-service problems, such as place of last drink (POLD) mentions by drivers arrested for DWI and calls-for-service provided by the law enforcement agencies.

Within the two communities, 10 intervention bars and 10 control bars were compared to gauge the effects of the RBS/enforcement program on serving practices. Data was collected

at three times: before initiation of the RBS/enforcement strategy (Wave 1); following the RBS training and one enforcement visit approximately 6 months after intervention startup (Wave 2); and 1 to 2 months following the third and final enforcement visit, approximately one year after the intervention startup (Wave 3).

The researcher conducted eight data-collection activities for the evaluation:

- pseudo-patron assessments to determine over-service to obviously intoxicated patrons in each bar
- bar observations by alcohol beverage control (ABC) officials for over-service violations
- bar patron breath tests at each bar to determine the proportion of patrons at high blood alcohol concentrations (BAC)
- self-reported driving behavior by drivers at the Department of Motor Vehicles or Bureau of Motor Vehicles (BMV) offices in each community, which were conducted independently by the jurisdictions
- calls-for-service near the intervention and control bars
- POLD data for drivers arrested for DWI
- DWI arrests of 21- to 34-year-old drivers
- police-reported alcohol involvement in crashes in each of the four communities

To examine broader changes beyond those affecting only the bars and their patrons, two comparison communities, Onondaga County, New York, and Toledo, Ohio, were used to examine changes from pre- to post-intervention in: public attitudes and reports of driving while impaired, DWI arrests, and the ratio of impaired-driving related crashes to non-impaired-driving-related crashes. No changes were expected in the comparison communities, as no similar program was being administered in either community during the intervention period.

Results

Monroe County, New York

Bar patron data indicated a delayed significant effect of the intervention that did not show up until the second post-intervention

period (about 1 year after intervention startup). Relative to the control bars, the reductions in the average BACs of bar patrons and in the proportion of intoxicated patrons ($BAC \geq .08$) were significantly greater in the intervention bars during the second post-intervention period.

The influence of the intervention was confirmed also by calls-for-service and DWI arrest data. From pre-intervention to post-intervention, the intervention bars experienced a significant reduction in the number of calls-for-service compared to the control bars. In addition, there was a significant drop in the proportion of 21- to 34-year-olds arrested for DWI after the intervention in Monroe County, New York, as compared to an increase in its comparison community (Onondaga County, New York).

Cleveland, Ohio

Results from bar patrons, pseudo-patrons, and the BMV data-collection analyses indicated that the intervention reduced bar patron intoxication and/or drinking and driving measures during the first post-intervention period only. The intervention bars performed significantly better than the control bars in terms of changes in average BACs of bar patrons and the proportion of intoxicated patrons. Such differences were not sustained in the second post-intervention period, when the two measures evidenced a significant increase in bar patron intoxication in the intervention bars. The intervention had a similar short-term effect in Cleveland on reducing the proportion of drivers who reported driving “after drinking too much” and an increase in the proportion of bar staff who refused service to pseudo-patrons in intervention bars. The significant increase in bartenders attempting to provide some type of intervention to pseudo-patrons in the intervention bars seemed more sustainable during the two post-intervention periods.

In addition, analysis of the proportion of drivers who reported being intoxicated in bars/restaurants before driving revealed a decrease in the intervention community (Cleveland, Ohio) compared to the comparison community (Toledo, Ohio) in the first post-intervention period, but further change in the second post-intervention period was not significant.

Discussion

The indications from this study are that RBS training coupled with enforcement reduced the incidence of bar patron intoxication (and potential impaired driving). It appears that when bar managers and owners are aware of the program and the enforcement of it, and servers are properly trained in RBS, fewer patrons become highly intoxicated (i.e., are overserved), and an effort is made to deny service to obviously intoxicated patrons. Given that about half of drivers arrested for DWI are coming from licensed establishments in any given community, if implementation of this strategy is widespread, it could have an effect on reducing impaired driving. RBS training, followed by visible and sustained enforcement, may be an important strategy to combat impaired driving and injuries associated with excessive drinking. Many of the findings in this study were consistent with expectations regarding the intervention’s influence, and the cumulative evidence points to a positive effect on reducing intoxication at bars. These findings validate prior research on RBS as a countermeasure to prevent excessive drinking and impaired driving, and indicate that more widespread implementation in communities, although not easily accomplished, could have an effect on impaired driving and other alcohol-attributable harm.

How to Order

Download a copy of the *Evaluation of Responsible Beverage Service to Reduce Impaired Driving by 21- to 34-Year-Old Drivers* (89 pages), prepared by the Pacific Institute for Research and Evaluation (PIRE), from www.nhtsa.gov/behavioral-research. J. DeCarlo Ciccel, was the task order manager for this project.



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