

# **A Summary Report of Six Demonstration Projects To Reduce Alcohol-Impaired Driving Among 21- to 34-Year-Old Drivers**





# Projects to Reduce Impaired Driving Among 21- to 34-Year-Old Drivers

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**Projects to Reduce Impaired Driving  
Among 21- to 34-Year-Old Drivers**

**Introduction**

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**A Summary Report of  
Six Demonstration Projects to  
Reduce Alcohol Impaired Driving  
Among 21- to 34-Year-Old Drivers**

**Introduction**

This report summarizes six projects designed to address impaired driving among 21- to 34-year-olds. The report is organized into five chapters. The first chapter discusses the background and initiation of the projects. The second chapter provides a summary of each project's purpose, underlying theory or model, setting, intervention, and evaluation techniques. The strategies were implemented in a variety of settings, using a number of innovative techniques for addressing and evaluating impaired driving interventions. The third chapter describes the characteristics of the interventions and promising practices. The fourth chapter discusses the process evaluation techniques that were applied and describes steps taken to develop, implement, and modify the impaired driving interventions. The fifth chapter is a summary of the document and provides explanation of the projects implications and utility for program planners.

**Report Audience**

People who develop, administer, implement, and evaluate impaired driving programs and activities at local, State, and national levels may benefit from reading this report. These include people involved with the day-to-day operations of impaired driving interventions or act in a supervisory capacity. Senior level administrators who are involved with health and safety issues may also find this document helpful. It can be used in strategic planning, program development, and problem-solving activities related to the promotion, maintenance, and improvement of health and safety within communities.

# Projects to Reduce Impaired Driving Among 21- to 34-Year-Old Drivers

## Executive Summary

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### Executive Summary

While progress has been made in reducing impaired driving, more than 16,000 lives are lost each year in alcohol-related motor vehicle crashes. Much progress in reducing alcohol-related motor vehicle crashes was made in the 1980s and early '90s. Much of the decline involved drivers under the age of 21. However, people age 21 to 34 continue to be disproportionately represented in alcohol-related motor vehicle crashes.

In 2000, the National Highway Traffic Safety Administration initiated a research project to study the impact of a comprehensive community program targeted at 21- to 34-year-olds. This evaluation focused on the Smart Roads program, a communitywide employer-based initiative in Pueblo, Colorado. The Smart Roads program is one of six projects described in this report.

In 2001, Congress made available, through NHTSA, \$1 million for demonstration programs designed to reduce alcohol-related traffic fatalities among 21- to 34-year-olds. Through a competitive selection process, five organizations were awarded funding to design, develop, and demonstrate their strategies. NHTSA awarded grant funds to the Institute for Public Strategies in Southern California, the Wisconsin Department of Transportation's Bureau of Traffic Safety, Montana State University, the Minnesota State Office of Traffic Safety, and the South Central Planning and Development Commission of Louisiana. Implemented from 2002 to 2004, the various strategies are described in this report and include:

- "Place of last drink" approach to identify and focus enforcement efforts on high-risk establishments in California;
- "Social marketing" alternative ride program in Wisconsin;
- "Social norming" marketing approach in Montana;
- Employer-based blue collar worker program in Minnesota; and
- Combined worksite training, media, and enforcement intervention in Louisiana.



Figure 1 U.S. map indicating States discussed in this summary report.

# Projects to Reduce Impaired Driving Among 21- to 34-Year-Old Drivers

## Executive Summary



Certain characteristics among the projects surfaced as common features of successful or promising practices. These features included use of data and research in program planning, taking a comprehensive approach, conducting pilot testing, and maintaining strong community partnerships.

While it is difficult to show immediate effects in reducing alcohol-related traffic fatalities due to the complexity of these projects and their limited duration, there was progress to report and some promising results. These included:

- In Ventura, California, project organizers developed a system for identifying problem outlets and designed complementing interventions to reduce the risk of serving/selling to under 21 year old minors and obviously intoxicated patrons.
- In Wisconsin, nearly 20,000 rides were given in the intervention sites over a one-year period. Based on self-reports of number of drinks consumed and choices of mode of transportation home, project organizers estimated the program prevented 15 alcohol-related crashes on area roads during the intervention period.
- In Montana's intervention area, there was a 13.7-percent relative decrease in the percentage of people who reported personally driving after drinking, and a 15-percent relative increase reported in the percentage that always used non-drinking designated drivers.
- In Pueblo, Colorado, nighttime single-vehicle injury crashes decreased by 24.8 percent compared with an increase of 4 percent in comparison sites.
- In Minnesota, approximately 15,000 employees received information on the risks of driving impaired through an impaired driving course and media campaign. Pre- and post-tests showed that there was an increase in knowledge about impaired driving after employees took the impaired driving course.
- In Louisiana, 8 law enforcement checkpoint operations were held, which resulted in the arrest of 129 people for impaired driving. This effort was coupled with over 12,000 paid advertisements and public service announcements on the costs and consequences of impaired driving and the responsibility that people, organizations, and communities have in preventing this problem.



















# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies



### Social Norms Marketing Campaign Montana MOST of Us® Project Montana State University



#### *Project Approach*

The MOST Of Us® Prevent Drinking and Driving Campaign was designed and implemented by Montana State University. Montana State University’s approach was to use a social norms strategy to reduce risky driving after drinking among Montana’s adults age 21 to 24. The social norms approach seeks to use education to influence changes in behavior by dispelling misperceptions about actual behaviors by the majority of the target population. This approach is built on the premise that people’s behaviors are influenced by their perception about how “most people” (the majority) behave.

#### *Background*

According to NHTSA’s Fatality Analysis Reporting System (FARS), Montana ranked first in the nation for alcohol-related fatalities per vehicle mile traveled in 2002, up from fourth in 1999. Although the State achieved a 60-percent reduction in alcohol-related crashes between the 1980s and the early 1990s, progress has stalled. In 2002, alcohol- or drug-related crashes accounted for approximately 10 percent of all traffic crashes in the State. Adults age 21 to 39 represented less than a third of the State’s licensed drivers, but were involved in nearly half of its alcohol- and drug-related crashes, with 21- to 24-year-olds having the highest percentage involvement.



Figure 2 Outline of the intervention counties used in the 21–34 Montana MOST of Us® Project.



# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies



The intervention was initiated through a baseline survey that showed 79.6 percent of Montana young adults had not driven within one hour of consuming two or more alcoholic beverage drinks in the previous month, although 92 percent of respondents perceived that the majority of their peers had done so. Therefore, a disparity existed within the population of interest between their perception and the actual norm. Based on these findings, a 15-month intensive media campaign was carried out in the 15-county intervention area in the western portion of Montana. Montana State University heavily saturated the treatment counties with social norms messages through paid radio and television commercials, local and college newspaper advertisements, theater slides, posters, billboards, and promotional items. Counties primarily in the central and eastern portions of the State were used as comparison sites and were exposed to low levels of free social norms media. All of the media communicated a normative message that “MOST Montana Young Adults (4 out of 5) Don’t Drink and Drive.”

### *Evaluation*

The evaluation of the Montana MOST of Us® Project employed a design that separate comparison and intervention counties based on designated market areas within Montana. Multiple telephone surveys were conducted on randomly selected residents age 21 to 34 in the comparison and intervention counties before, during (three measures were collected during the intervention), and after the media interventions. The survey measured changes in awareness of campaign normative messages; changes in perceived norms; self-reported drinking and driving attitudes and behaviors; and perceived attitudes and behaviors of their peers. Analyses were conducted on the self-reported data using unpaired tests of means, and regression and path analysis.

### *Reported Outcomes*

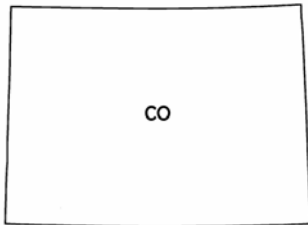
- By the end of the campaign, young adults in the intervention counties more accurately reported the social norms than their counterparts in the comparison counties.
- Factoring in the survey results of the comparison counties, follow-up surveys found a 7.5-percent relative decrease for the intervention counties in the percentage that believed that the average Montanan their age drove after drinking during the previous month, and an 11-percent relative increase in the percentage that accurately perceived that the majority of their peers use a non-drinking designated driver.
- In the intervention counties, there was a 13.7-percent relative decrease in the percentage that reported personally driving after drinking and a 15-percent relative increase in the percentage that always used a non-drinking designated driver.
- The campaign also affected attitudes towards impaired driving enforcement policy. Residents within the intervention counties reported a 16.5-percent relative increase in the percentage that would support passing a law to decrease the BAC legal limit for driving. At the time, the BAC legal limit in Montana was .10 g/dL; it has since been changed to .08 g/dL.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies



### Community, Media, Workplace Initiative “Smart Roads” Program Crossroads Turning Points, Inc., Colorado



#### *Project Approach*

The “Smart Roads” program was designed as a community effort involving two major components: an extensive media campaign (“DUI, the \$8,866 Hangover”) and a workplace educational initiative (“Buzzing and Tooling”). The media campaign included highly focused television, radio, newspaper, and billboard advertisements. Businesses such as construction companies and bars displayed and distributed promotional material such as paycheck inserts, table tents, posters, and banners. The workplace component of the project was an education program designed specifically to stimulate and challenge the thinking of blue-collar workers regarding their drinking and driving beliefs and practices. Participating employers offered three 50-minute sessions at work sites that included interactive activities, and emphasized issues of control, consequences, perceptions of norms, and behavioral beliefs.

#### *Background*

The Colorado Department of Transportation funded Crossroads Turning Points to administer the Smart Roads Program in Pueblo County, Colorado. Crossroads Turning Points is an established addiction treatment center that offers both prevention and intervention services in Colorado. A comprehensive research study conducted by BBC Research and Consulting revealed that Pueblo ranked number one in drunk driving arrests per capita among Colorado cities. Pueblo also has more bars and liquor licenses per capita than any other city in Colorado. Drivers from Pueblo County involved in serious crashes were 36 percent more likely than the average driver in Colorado to be suspected of drinking and driving. From 1995 through 1999, men age 21 to 35 were involved in more than one-third of the Pueblo Police Department’s DUI arrests.

#### *Implementation Activities*

The program involved three components: a targeted media campaign, a workplace initiative, and community involvement encompassing a broad range of organizations.

#### Media Campaign

Baseline data for the media campaign were collected through a series of telephone surveys and focus groups to understand the lifestyles, attitudes, and beliefs of 21- to 34-year-old drivers who exhibit unsafe driving behaviors. This research was used to identify potential themes or approaches for the development of appropriate driving-safety initiatives and campaign materials. Based on the survey results, four focus groups were used to test concepts and materials in support of an anti-drinking and driving campaign.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

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The selected concept demonstrated a downward spiral that results from an impaired driving conviction and how this negatively impacts one's family, financial, and professional lives. The overwhelming majority of the focus group participants expressed a preference for this approach with the tagline "DUI, the \$8,866 Hangover." In addition to the financial costs, the psychological and social consequences of a DUI were also communicated. For example, one message depicts the disappointment of family members with a young man who was convicted of a DUI. The concept was incorporated into a variety of advertising channels, including television, radio, newspaper/billboards, paycheck inserts, table tents, posters, and banners.

### Workplace Initiative

The "Buzzing and Tooling" initiative was an interactive educational program primarily for blue-collar workers. The worksite intervention was designed to stimulate and challenge the thinking of blue-collar workers regarding their drinking and driving beliefs and practices. The program consisted of three 50-minute sessions of interactive activities, emphasizing issues of control, consequences, perceptions of norms, and behavioral beliefs.

### Community Involvement

Community support through the Pueblo Drive Smart Coalition helped contribute to the success of the Smart Roads program. Representing 44 members of various local public and private interests, the Pueblo Drive Smart Coalition included Crossroads Turning Points, law enforcement, education, medical, and insurance professionals along with a host of other organizations.

### ***Evaluation***

The evaluation compared the test site to a comparison site. Pueblo and eight surrounding counties that shared the same media market served as the test site. The remainder of the counties in the State served as the comparison site. The outcome measures were obtained through crash data provided by the Colorado Department of Transportation. The crash data included nighttime injury crashes and nighttime single-vehicle injury crashes (a surrogate measure of alcohol-related crashes) in both the intervention and non-intervention counties. Descriptive statistics and chi-square tests of difference were used to analyze the changes and differences over time.

### ***Reported Outcomes***

- The costs of a DUI were obtained by adding up the typical increased insurance costs, lawyer fees, fines and other expenses. Following the campaign, when data concerning the perceptions of only Pueblo County were analyzed, 50 percent of the men 21 to 34 estimated that a DUI conviction would cost them more than \$8,000. Statewide (the comparison group), most people believed the cost would be less than \$1,000.

## Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

### Project Strategies



- Nighttime injury crashes in Pueblo County decreased from 38 prior to the intervention to 23 after the intervention, a 40 percent decrease. Nighttime injury crashes in the rest of the State (excluding Pueblo County) increased 2 percent from 7,965 to 8,147. Similar changes occurred in the percentage of nighttime injury crashes involving drivers 21 to 34 years old.
- When Pueblo and eight adjacent counties were analyzed as the intervention site, a decrease in nighttime injury crashes (39%) was also seen. In the rest of the State (excluding Pueblo and the eight adjacent counties), nighttime injury crashes increased 3.3 percent. Similar findings were found for the percentage of nighttime injury crashes involving drivers 21 to 34 years old.
- The intervention sites reported nighttime single-vehicle crashes decreased by 24.8 percent; an increase was reported within the comparison sites of 4 percent.

NHTSA commissioned the Mid-America Research Institute to further evaluate the “Smart Roads” program. A report, “**Evaluation of Pueblo County, Colorado’s Smart Roads Project**,” was published in January 2006 (DOT HS 809 955). This evaluation of the Smart Roads program suggests that the program reduced nighttime injury crashes involving drivers in the county age 21 to 34. The evaluation report is available through the NHTSA Web site at [www.nhtsa.gov](http://www.nhtsa.gov).

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies

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### **Impaired Driving Education for Blue-Collar Workforce Minnesota “Last Call” Project Minnesota Office of Traffic Safety**



#### ***Project Approach***

The Minnesota Office of Traffic Safety created an impaired driving education campaign, “Last Call,” specifically focused on 21- to 34-year-old blue-collar workers. The goal of the project was to reduce the number of fatalities in this group by 20 percent by educating the labor force about the hazards of impaired driving, raising their awareness about the impaired driving problem, and changing their drinking and driving behavior. The approach was to reach the target population through their employers with an educational training module and

through public information and a promotional campaign. The educational training module was intended to be used by safety directors and incorporated into their safety programs.

#### ***Background***

Alcohol-related traffic fatalities in Minnesota had increased 16 percent, from 83 in 1999 to 96 in 2000. The greatest increase was among drivers 21 to 34 years old. The Minnesota Office of Traffic Safety determined that alcohol-related fatalities in this age group were nearly double that of other groups. A review of death certificates indicated that 64 percent of those who died would have been considered “blue collar” workers. With nearly 5 million people in Minnesota and 56 percent of its work force blue collar workers, the project was implemented statewide.

#### ***Intervention***

The Minnesota Office of Traffic Safety’s education campaign “Last Call” consisted of three components: an educational training module designed to be incorporated into required safety training classes, public information, and a promotional campaign.

#### **Educational Training Module**

The objectives of the educational training module were to help drivers understand the risks and consequences of driving while impaired by alcohol or drugs and assist them in developing techniques and strategies to avoid these risks. Drivers received the educational training module through a required general contractors training course for all new members of the Construction Laborers Education, Apprenticeship and Training Fund of Minnesota and North Dakota. The module was offered weekly at a training facility from December 2002 through April 2003. It consisted of a presentation and an 18-minute video on Minnesota’s drinking and driving problem. Focus groups representing the target group were conducted to develop the video and messages, and to determine the best

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method to reach the 21- to 34-year-old blue-collar workers. The video features true stories of Minnesotans who have been affected by impaired driving.

### Public Information Campaign

A public information campaign was conducted to raise awareness about the impaired driving problem. The campaign was devised to reach broad audience and designed to further reiterate and reinforce the messages conveyed to those who participated in the training module.

The public information campaign placed messages on hard hats, safety goggles, drink coasters, posters, indoor billboards, and radio. Using stickers, messages were placed on hard hats and safety goggles, saying "Make a Pact, Have a Plan to Drive Sober." Stickers were distributed to participants who attended the educational training module. Coasters and posters with varying messages on impaired driving consequences and sober driving were provided to bars where 21- to 34-year-olds often gather. Indoor advertisements were placed in restrooms in bars frequented by 21- to 34-year-old blue-collar working males, in 236 locations, from December 2002 through March 2003. Three radio advertisements were created: *Make a Pact, Have a Plan*; *Cost and Consequences*; and *Cops Talk*. The *Make a Pact, Have a Plan* advertisement is a message to reaffirm the lessons of the training module of planning ahead if choosing to consume alcohol such as calling a friend or designating a sober driver. The *Cost and Consequences* advertisement detailed the costs of a DWI. The *Cops Talk* advertisement highlighted officers describing their reasons for being committed to enforce DWI laws. The advertisements were broadcast for 18 weeks and ran 63 times per week.

### Promotional Campaign

The Minnesota Department of Public Safety advertised the availability of the Last Call training module through TV, print, and radio. The campaign was launched in June 2003, in coordination with the State's month-long impaired driving enforcement campaign.

### ***Evaluation***

The evaluation focused on determining whether the module was well-received and whether it was effective in increasing knowledge and public awareness. The evaluation consisted of: pre- and post-tests, field observations, follow-up interviews with participants, and telephone and written interview with key informants.

Pre- and post-tests were administered to each participant of the module over the 20 weeks. Tests were used to examine the knowledge base prior to, and three days following, the module. Data were gathered to determine whether there was an increase in awareness and knowledge of the issues presented in the module. The post test also included questions regarding exposure to media messages, impact of the video, and how participants planned to use the information presented.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies

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Field observations were conducted to examine the program implementation process, including the length of the module, time of delivery, number of participants, and barriers to implementation.

Follow-up interviews were conducted using a focus group format. Focus groups were conducted following the delivery of the program to determine the initial reactions of participants and their satisfaction with the training module.

The telephone interviews were conducted with a sample of safety directors from Minnesota companies that employ blue-collar workers. Questionnaires were mailed to a random sample of safety directors from the same group. The interviews and questionnaires were used to determine the level of concern and priority that impaired driving represented to the safety directors and their interest in the educational training module.

### *Reported Outcomes*

- Responses to seven of the eight questions asked in connection with the educational training module showed an increase in knowledge from pre- to post-test. The greatest increase in knowledge was in response to the question pertaining to who dies most often in impaired driving crashes. Considerable increases were shown also in response to questions pertaining to when impairment begins and the percentage of persons who would have lived had they worn a seat belt.
- Participants reported that the module reaffirmed their decisions to not drink and drive or to “think twice.”
- More than 200 companies have used the educational training module.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies



### **Workplace Train the Trainer, Enforcement, and Media Program Louisiana Drinking and Driving: It Costs Too Much Project Louisiana South Central Planning and Development Commission**



#### ***Project Approach***

The Drinking and Driving: It Costs Too Much project was designed to educate 21- to 34-year-olds in the South Central Region of Louisiana about the effects of drinking and driving on their family, friends, and community. The goals of the project were to educate the public about the effects of alcohol impairment and driving, and reduce the number of crashes associated with alcohol-impaired drivers. The core component of the project was a worksite train the trainer program that followed a

DWI enforcement effort and media campaign. The South Central Planning and Development Commission (SCPDC) working with its Safe Communities Partnership, a coalition of community groups, organizations, and agencies, was the lead agency responsible for implementing the project.

#### ***Background***

Louisiana consistently ranks among the top 10 States with high rates of alcohol-related fatalities. In 2003, 46 percent of the 791 fatal crashes in Louisiana were alcohol-related. In 2004, the alcohol-related traffic crashes dropped to 45 percent (Louisiana Highway Safety Commission, 2004). The South Central Region of Louisiana covers six Louisiana parishes (counties): Assumption, Lafourche, St. Charles, St. James, St. John the Baptist, and Terrebonne. The impaired driving statistics for the region are similar to those for the entire State. There were 5,237 alcohol-involved crashes in the six-parish SCPDC Region between 1998 and 2002 — more than 1,300 per year. More than 42 percent of those crashes involved drivers between 21 and 34 years old; one-third of all alcohol-involved crashes involved a male 21- to 34 year-old driver.

#### ***Intervention***

Based on prior experience and its Safe Community Partnership, SCPDC believed that messages focused on costs and consequences delivered through the workplace, coupled with a reinforcing DUI enforcement effort and media campaign, could effectively reach the 21- to 34-year-old population. The key to the program was to reach the target audience through a variety of mechanisms: worksite training, DWI enforcement, and the media.

#### **Worksite Train the Trainer Program**

Through previous experience working with the Office of Health and Safety Administration, SCPDC learned that training employees whose primary purpose was to educate other employees about safety in the workplace was a cost effective means to reach their



# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Project Strategies

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targeted audience. The training was incorporated into ongoing programs offered at plants, large businesses, public agencies and other employment settings that must provide in-house safety training in order to comply with Federal, State, or insurance program requirements. In connection with the train-the-trainer sessions that were delivered, SCPDC developed a manual and video that focused on the effects of alcohol and the physical, financial, emotional, social, and occupational consequences that can result from alcohol misuse and impaired driving. The video provided vivid depictions of the profound consequences of impaired driving, and the training sessions emphasized the role and responsibility of the employee and the employer in addressing impaired driving. Five separate train-the-trainer sessions were held during February and May of 2004.

### Enhanced Law Enforcement

DUI enforcement checkpoints were conducted from July 2002 through June 2004 throughout the six-parish area during times of the year when impaired driving was most prevalent, including Mardi Gras, the summer months, the Labor Day holiday period and the month of December. To strengthen the message concerning the consequences of impaired driving that was to be delivered through the worksite training program, the enforcement activities were held primarily before the training sessions. Local newspapers, radio, and television were alerted to the enforcement activities to publicize those activities, and thereby heighten public perception about the risks of being caught while driving impaired.

### Media Campaign

Television public service announcements (PSA) were used as the primary medium to reinforce the messages that were delivered through the worksite training program. SCPDC received assistance from Nicholls State University to craft messages that would relate to the target audience. Nicholls State University collected data through substance abuse and DWI classes to develop a profile of the target audience and the most effective method of motivating these individuals to minimize their drinking-and-driving behavior. Their research showed that males 21 to 34 ranked friends, followed by self, health, job, and money as the most important aspects of their lives. Overall, their research suggested that family and friends were more important than economic costs or personal endangerment. SCPDC developed three PSAs with messages on emotional and social costs, the responsibility of all to address impaired driving, and individual responsibility. The PSAs aired on local cable access networks from December 2003 through February 2004.

### *Evaluation*

While the goal of the project was to educate the public on the effects of alcohol impairment and driving, and to reduce the number of alcohol-related crashes, SCPDC recognized that determining the impact of the project would be a long term effort. Therefore, SCPDC focused on a process evaluation to determine the level of effort achieved. SCPDC tracked the number of train-the-trainer programs conducted and the number of worksite training sessions that resulted. To measure the impact of the train-the-trainer

## Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

### Project Strategies

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program, participants were asked to complete a survey, and random follow up visits were held with trainers. In addition, the level of DUI enforcement activities was tracked as well as the number of paid and free media advertisements and news stories produced.

#### ***Reported Outcomes:***

- Within the six-parish area, 71 employees representing 37 different companies were trained to be worksite trainers.
- SCPDC estimated that the trainers delivered the educational program on the costs and consequences of drinking and driving to more than 1,300 employees.
- Trainers reported on the survey that they felt the information presented was not widely known or understood; and it improved the trainers' understanding of the seriousness of the problem.
- Eight law enforcement checkpoint operations were initiated; they resulted in 376 DWI arrests; 113 to people age 21 to 34.
- There were 6,101 paid television advertisements and 8,218 free public service announcements aired on the costs and consequences of impaired driving and the responsibility that individuals, organizations, and communities have in preventing this problem.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Characteristics of Successful Interventions

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### *Chapter 3: Characteristics of Successful Interventions*

An examination of these various strategies designed to reduce impaired driving among 21- to 34-year-olds revealed characteristics that can be used to more effectively implement these or other interventions. These characteristics include:

- Using conceptually-sound interventions;
- Collecting preliminary data to direct the intervention;
- Piloting the intervention;
- Involving partners;
- Implementing a comprehensive intervention;
- Being innovative;
- Using a multidisciplinary team;
- Extending the duration of the project; and
- Applying the intervention at the appropriate level.

#### *Using Conceptually-Sound Interventions*

Conceptually sound interventions are based on previous research and the application of quality models/theories.

There are a number of models and theories that can address the specific needs of an intervention. A model that best meets the needs of your particular intervention should help to determine:

- areas that need to be addressed to effect change;
- techniques for facilitating change; and
- methods for planning appropriate evaluations.

#### *Collecting Preliminary Data to Direct the Intervention*

The use of a data-driven approach to initiate program development and to guide implementation was a strong theme throughout the baseline data collection and interventions. This type of effort can be especially helpful in tailoring programs to meet the specific needs of the population and a number of geographic considerations.

The Minnesota Last Call Project, for example, spent considerable time collecting data to develop and refine the “Last Call” video. Focus group data were used to determine the approach and content of the video. The Wisconsin Road Crew Project and the Colorado Smart Roads Program used a similar approach. In the Wisconsin intervention, data were collected to identify the most appropriate ride service for each of the four intervention communities and to develop common branding techniques across all of the programs. In

## **Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers**

### **Characteristics of Successful Interventions**

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the Colorado intervention, a series of focus groups was used to guide the media campaign. The Louisiana intervention collected data through surveys to help develop its worksite curriculum and to determine the content of its television advertisements. Also, the Southern California Impaired Driving Project collected data on the POLD to identify problem alcohol retailers and initiate their intervention. Therefore, the use of preliminary data was common across the interventions.

#### ***Piloting the Intervention***

Piloting an intervention allows practitioners to test programming to see if the project is ready for implementation. It can prevent a host of problems ranging from disjointed programming to public relations problems.

The Minnesota Last Call Project worked closely with intended group members, union officials, and health professionals while piloting its video/curriculum over a four-month period to be certain it developed a quality product. Similarly, the messages developed through the Montana MOST of Us® Project, the Wisconsin Road Crew Project, the Louisiana Drinking and Driving: It Costs Too Much and the Colorado Smart Roads Program tested their messages and branding prior to distribution and made modifications as needed on an on-going basis.

#### ***Involving Partners***

Partners are individuals, groups, organizations, or entities that help support health and safety interventions. The use of partners is often essential in developing credibility within communities and to gain access to resources that are needed to conduct interventions and research.

A number of important partnerships were formed through the 21-to-34-year-old interventions. The Minnesota Last Call Project obtained strong support from union representatives who mandated that their members attend the Last Call impaired driving educational session. Safety representatives and beer distributors built a partnership in agreeing that preventing impaired individuals from operating motor vehicles was something that needed to be addressed. The Louisiana Drinking and Driving: It Costs Too Much program used existing networks within the community to form partnerships that helped develop and implement the three components of its intervention. By using an existing network infrastructure, the time needed to develop significant working relationships was shortened and the development and implementation process was consequently expedited.

#### ***Implementing a Comprehensive Intervention***

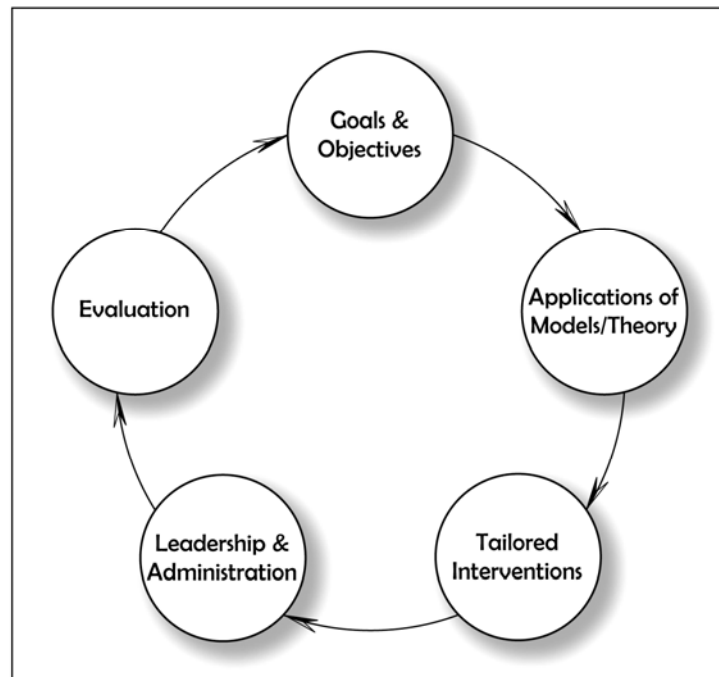
There are a number of components associated with successful interventions. First, quality goals and objectives should be developed that help focus and direct the intervention.

## Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

### Characteristics of Successful Interventions

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Second, an appropriate model or theory should be used to guide it. Third, effective strategies should be developed as part of program planning and implemented specifically for the intended population and community. Fourth, the intervention activities should be directed by effective program leadership and administration. Finally, the program should be evaluated during and after the intervention so adjustments and assessments of the interventions' efficacy can be made. To maximize success, all these components should be an active part of an intervention (See the below figure).



**Components of a successful intervention.**

The Wisconsin Road Crew Project incorporated all of these components into their intervention. The project had a clear and focused goal of reducing impaired driving crashes by 5 percent within the targeted communities over a one-year period. The practices and principles associated with commercial marketing guided the development and implementation of the program. Considerable effort was given to develop a service and message campaign that would meet the needs of 21- to 34-year-olds within the intervention counties. In addition, process and outcome evaluations were integral parts of the program.

Similarly, the Montana MOST of Us® intervention developed an outcome goal to reduce impaired driving behaviors in a sample of Montana's young adults 21 to 34 years old. The approach used environmentally grounded social norms theory as the foundation of the intervention. Tailored interventions, leadership, and administration were facilitated through a seven-step intervention process. The seven-step process included using baseline data to develop messages that were then incorporated into site-specific marketing

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plans. The messages and plan were piloted, modified, and then implemented. Evaluation during and after the intervention was used to identify the strengths, weaknesses, and final outcomes of the social norms intervention.

***Innovation***

Many health and safety issues are resistant to change. Often, the approach to addressing these issues is to use the same approaches again and again with only minor changes. However, innovative thinking and the application of innovations are necessary if progress is to be made. Innovations can come in a variety of forms, such as the development of new theories, unique applications and interpretations of existing theories, novel problem-solving techniques, etc. Ultimately, what is needed is a willingness to think and work beyond the boundaries of traditional approaches that can restrict options and ideas.

The Louisiana Drinking and Driving: It Costs Too Much Program coordinated programming that addressed change through worksites, advertising and law enforcement under a common message of the costs and consequences associated with impaired driving. The innovation was the packaging of multiple approaches used to simultaneously facilitate change. Similarly, the Southern California Impaired Driving Project adopted innovative techniques for identifying problem alcohol retailers in Ventura County by collecting POLD data from drivers who were convicted of impaired driving offenses. This and other data collection efforts provided the California intervention staff with an objective method for classifying alcohol retailers as problem establishments and refuted their argument that they were being picked on unfairly by regulating bodies. Finally, the Wisconsin Road Crew decision to use limousines to transport drinkers to bars and back home offered an innovative transportation alternative. Patrons used the service and impaired driving was reduced.

***Using a Multi-Disciplinary Team***

The strategies used in the interventions targeted at 21- to 34-year-olds required the knowledge, skills, and expertise of people and groups from a variety of disciplines. It is uncommon to find groups that have all the resources needed to implement the complex interventions highlighted in this report.

The Southern California Impaired Driving Project required the involvement of individuals who had expertise in statistics, program evaluation, conflict resolution, bar staff training, media advocacy, policy development, and monitoring. The Institute for Public Strategies implemented the intervention and had many skilled professionals as part of its staffing. In addition to its in-house staff, it hired a project coordinator and secured statistical expertise through outside vendors.

## **Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers Characteristics of Successful Interventions**



### ***Extending the Duration of the Project***

The duration of the project was similar across the various interventions conducted on 21- to 34-year-olds. However, the project managers expressed their view that, generally speaking, two years was not sufficient time to allow the interventions to reach their full change capability.

For example, the Southern California Impaired Driving Project had identified and recruited a number of problem alcohol retailers. However, once the retailers completed the responsible beverage sales and service-training program with the California intervention staff, additional time was needed to monitor the sites and evaluate the impact on impaired driving violations. Also, the Louisiana Drinking and Driving: It Costs Too Much Program staff underestimated the time required to develop and coordinate three interventions directed at impaired driving. Given the complexity of their intervention, a minimum of three years was probably needed to effectively execute the intervention in its entirety.

### ***Applying the Intervention at the Appropriate Level***

Applying the intervention varies between the individual, a group (interpersonal), and the environment. Interventions for the individual typically involve strategies, such as one-on-one counseling or classroom educational sessions. Application at the interpersonal level considers the interactions between the individual and influential groups, such as the family unit. Application at the environmental level includes addressing physical, social, or political environments. All of these levels can be effective in promoting health and safety; the key is to properly match the level(s) with a given intended population, geographic area, and health/safety issue.

The majority of the interventions reviewed in this report addressed impaired driving through environmental level interventions. Specifically, the Montana MOST of Us® Project and the Colorado Smart Roads Program both used media messages as part of their intervention to change impaired driving behaviors. Similarly, the Wisconsin Road Crew Project offered alternative transportation services and the Southern California Impaired Driving Project used policy and staff training to change how problem alcohol retailers distribute and serve alcohol to their patrons. The Minnesota Last Call worksite education program and the Colorado Smart Roads worksite educational program were delivered at the individual and interpersonal level. The educational programs were individual level interventions and the influence that Minnesota was able to leverage through unions provided interpersonal level programming. Specifically, they were able to garner the support and influence of the union to encourage its members to avoid impaired driving.

The Louisiana intervention attempted changes at individual and environmental levels. The worksite programming offered education at the individual level and the media and enforcement interventions provided environmental modifications.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Evaluation



### Chapter 4: Evaluation

The evaluation of interventions typically serves two functions. First, a process evaluation is used during the intervention to determine whether the intervention is being implemented as intended, e.g., “did we do what we said we were going to do?” Second, an outcome evaluation assesses the impact of the intervention. Typically, this involves measuring change in some area of interest, such as the number of alcohol-related crashes, instances of driving after drinking, use of designated drivers, or attitudes related to drinking and driving.

This chapter highlights process and outcome evaluation techniques used to evaluate the six interventions. A brief discussion of how the techniques were used to enhance the intervention is also provided.

#### *Process Evaluations*

A variety of quantitative and qualitative data collection techniques were used to evaluate the interventions. In all instances, process data were used extensively to develop the programs and to make modifications during implementation. The following descriptions provide a sample of the process evaluations conducted for the six interventions.

#### Southern California Impaired Driving Project

Bar Risk Assessments — High-risk alcohol retailers were identified in Ventura County. Once the sites were identified, the intervention specialists and retail personnel developed policies and procedures that employees would follow to reduce problem drinking. Subsequently, trained professionals observed and documented whether the retailer was adhering to the recommended policies and procedure changes using a bar risk assessment tool. The evaluations let the intervention staff monitor retailers and see whether the changes designed to decrease impaired driving were actually being implemented.

#### Louisiana Drinking and Driving: It Costs Too Much Program

Tracking — The Louisiana intervention relied heavily on tracking and counting activities associated with the three-pronged intervention. For example, the tracking determined the number of employees trained to be worksite trainers within the six-parish area; the number of employees in a variety of worksite settings who participated in the worksite curriculum; the number of checkpoint operations conducted and arrests made for impaired driving; and the amount of media generated, including paid television advertisements and unpaid public service announcements. These measures provided feedback on the progress of the intervention over time.

#### Minnesota Last Call Project

Piloting — The Last Call intervention was based on a video that graphically depicts the negative consequences of impaired driving and was also based on a curriculum that com-



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## Evaluation



plements the video. The package was piloted extensively over several months on groups of blue-collar workers. Periodically, a trained evaluation specialist would view the class sessions and meet with the class participants. Through this process, the specialist was able to obtain information related to optimal class duration, participant numbers, and barriers to implementation. Participant interest and satisfaction were also measured as part of the process. The detailed data collection effort helped test and refine the educational program prior to distribution to worksites.

### Montana MOST of Us® Project

**Determining Dosage** — A fundamental goal of a social norms intervention is to identify a misperception in a target population and accurately communicate the actual norm to the group members, e.g., most (4 out of 5) Montana young adults don't drink and drive. Therefore, the MOST of Us® staff implemented a media campaign using periodic messages through a variety of distribution channels that took advantage of free PSAs or low-cost air times. However, survey data showed that the low-dose campaign message was only recognized by one-third of the intended population. Based on these findings, additional funds were secured for a high-dose media campaign. The results generated through the survey provided evidence that additional funding was needed to modify the intervention approach and increase the dosage of messages. In short, the process evaluation enabled the staff to make intervention modifications that would optimize the chances of changing the misperceived norm.

### Wisconsin Road Crew Project

**Advisory Committee** — Each intervention site in the Road Crew project solicited program information from representatives of the intended group through an advisory committee of 21- to 34-year-old men. Collecting data from this group was important because these men offered a glimpse into the values, perceptions, thoughts, and feelings of the intended audience. The sites that were ultimately most successful (in terms of the number of people who used the service and the program's sustainability) implemented the Road Crew program using limousines to transport drinkers. The idea for using a limousine came from this committee.

Once the Road Crew started the transportation intervention, the site coordinators kept a log of the number of people who used the transportation services. The log represented a simple way of evaluating whether people were using the service, peak usage days for scheduling drivers, and whether interventions were needed to maintain/increase usage.

### Colorado Smart Roads Program

**Tracking** — The primary component of the Colorado Smart Roads Program was a media strategy that depicted the costs of being convicted of an impaired driving offense. A tally was kept on an on-going basis of the number of advertisements, the times the ads were placed, and the channels used to distribute the messages. Specifically, the number of television ads aired during the various programming times were tracked. In addition, the

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program tracked the number of radio spots and the manner in which the ads were conveyed (e.g., in English, in Spanish, an audio version of the television ad, etc.) This simple tracking system enabled the Smart Roads staff to identify whether enough messages were being distributed through the proper media channels during the desired time slots.

### *Outcome Evaluations*

The evaluation designs varied across the interventions. Three used control groups (quasi-experimental design), two did not use a comparison group and one did not conduct an outcome evaluation. The Colorado Smart Roads Program, the Montana MOST of Us® Project, and the Wisconsin Road Crew Project all conducted their quantitative analysis through thoughtful modeling that included control variables. The lack of control groups in the two interventions severely limited any conclusions that can be made about the interventions. Specifically, it could not be determined whether changes were caused by the programming associated with the intervention or some other factor such as other interventions implemented within the intervention site. Similarly, the intervention that did not conduct an outcome evaluation had no data that measured whether the intervention was effective at facilitating changes.

A variety of data collection techniques were used to collect data. The techniques included paper and pencil surveys, telephone surveys, face-to-face interviews, face-to-face focus groups, telephone focus groups, internet searches, literature reviews, observations, and downloading data from existing data sets. The most common outcome evaluation data collection technique was some type of survey that would measure the variables of interest, e.g., drinking and driving behaviors before and after an intervention. The sophistication of the data collection efforts also varied considerably.

### Wisconsin Road Crew Project

The Wisconsin Road Crew used comparable Wisconsin counties that did not receive the transportation service interventions as their comparison group. The use of comparison sites enabled the researchers to address a critical question, “Did the intervention work?” The Wisconsin Road Crew Project researchers used a number of State and national data sets to estimate the impact their intervention had on impaired driving crashes. An automated voice system and touch-tone response system were used in one of the Wisconsin Road Crew Project surveys to help respondents feel comfortable reporting sensitive information on topics such as drinking and driving. The Wisconsin Road Crew Project was the only intervention that obtained a measure of crashes/deaths averted. This estimate was based on the use levels of their transportation program and crash/death rates from State and national databases. The intervention demonstrated a 17.6 percent reduction in impaired driving crashes over a one-year period based on these calculations.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Evaluation



### Montana MOST of Us® Project

The Montana MOST of Us® Project used counties outside its media messaging areas as its comparison sites. Montana used a random digit-dialing method to survey residents in the intervention and comparison counties. This was done to ensure a random selection of respondents over a large geographic area. The Montana MOST of Us® Project was able to demonstrate significant and positive changes in self-reported personal attitudes and risky behaviors related to driving impaired.

### Colorado Smart Roads Program

The Colorado Smart Roads Program used counties outside their media messaging areas as their comparison sites. The crash data used in the Colorado Smart Roads Program were provided through the Colorado Department of Transportation's computerized records of police crash reports across the State. This tool enabled the researchers to gather data on nighttime injury crashes (NI) and nighttime single-vehicle injury crashes (NSVI). The Colorado Smart Roads Program used two types of crashes as indirect measures of alcohol-related crashes, NI crashes (NI) and NSVI crashes (NSVI) involving 21- to 34-year-olds. The results of these analyses revealed that significant reductions occurred within the intervention sites over the comparison sites as a result of the intervention. The Colorado Smart Roads Program had over 40 stakeholder groups that supported the intervention during and after the funding period.

### Southern California Impaired Driving Project

The Southern California Impaired Driving Project's POLD survey was designed by the evaluation and intervention staff to identify the place of last drink after an individual was convicted of an impaired driving offense. The tool was also designed to measure the days of the week, time of day, and area where the offense occurred. The California staff refined the training and data collection of POLD data with alcohol counselors to develop a system that provided valid and reliable data.

### Minnesota Last Call Project

The Minnesota Last Call Project obtained information for the development of its educational curriculum from union representatives. Paper-and-pencil pre- and post-tests surveys were given to the participants in the Minnesota Last Call Project prior to the training session and three days after the session. The surveys primarily evaluated changes in knowledge and some behavioral and attitudinal measures.

### Louisiana Drinking and Driving: It Costs Too Much Program

The Drinking and Driving: It Costs Too Much intervention was designed only as a process evaluation and therefore produced no tangible outcome measures associated with it.

# Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

## Summary



### Chapter 5: Summary

While progress has been made in reducing impaired driving, more than 16,000 lives are lost each year in alcohol-related motor vehicle crashes. In 2006 alone, 17,602 people died in alcohol-related crashes. People age 21 to 34 continue to be disproportionately represented.

This document reports on six distinct strategies that have been demonstrated and/or studied, designed specifically to reduce alcohol-related traffic fatalities among 21- to 34-year-olds. They include:

- “Smart Roads” program, which included a community-wide effort and employer-based initiative in Colorado;
- “Place of last drink” approach to identify and focus enforcement efforts on high risk establishments in California;
- “Social marketing” alternative ride program was demonstrated in Wisconsin;
- “Social norm” marketing approach was demonstrated in Montana;
- Employer-based blue collar worker program was implemented in Minnesota; and
- Combined worksite training, media, and enforcement intervention tried in Louisiana.

All of the interventions demonstrated the ability to facilitate change among 21- to 34-year-olds. The interventions tested a variety of strategies, including policy development, enforcement of new and existing policies, enhancing infrastructure, use of media to convey messages and education. The demonstrations took place in a variety of settings, including urban areas, rural towns and workplace settings; one was conducted statewide.

The various strategies employed some distinct elements or characteristics that were critical to these efforts, including: using conceptually-sound interventions; collecting preliminary data to direct the intervention; piloting the intervention involving partners; implementing a comprehensive intervention; being innovative; using a multi-disciplinary team; extending the duration of the project; and applying the intervention at the appropriate level.

The evaluation designs varied across interventions. Process data were used in all instances to develop the programs and to make needed modifications during implementation. Outcome data were used in some instances to measure impacts of the interventions. A variety of quantitative and qualitative data collection techniques were used to collect data to evaluate the interventions. While it is difficult to show immediate impacts on the reduction of alcohol-related traffic fatalities due to the complexity of these projects and their limited duration, there was progress to report and some promising results.

# **Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers**

## **Summary**



This report is intended for to be used by people who develop, administer, implement, and evaluate impaired driving programs and activities at State, local and national levels. It is hoped that the lessons learned through these demonstrations will help others to develop, implement, and evaluate effective programs to reduce impaired driving and the resulting alcohol-related crashes, injuries and fatalities among 21- to 34-year-olds. Law enforcement agencies including liquor law enforcement, employers, college and universities, and those in the hospitality industry may specifically find this useful.

## Projects to Reduce Impaired Driving Among 21- to 34-year-old Drivers

### Resource Contact Information

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#### *Resources:* **Project Contact Information**

##### Southern California Impaired Driving Project

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##### Minnesota Last Call

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**Projects to Reduce Impaired Driving  
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**Resource Contact Information**



Louisiana Drinking and Driving Costs Too Much Program

South Central Planning and Development Commission

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U.S. Department of Transportation  
**National Highway Traffic Safety  
Administration**

