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Reduction in Nighttime Injury Crashes Seen with Pueblo County, Colorado's Smart Roads Program



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In 2003, there were 17,013 alcohol-related fatalities in the United States. The highest percentage of drivers with a blood alcohol concentration (BAC) of .08 or higher was for drivers 21-24 years old (34%), followed by drivers age 25-34 (32%). These 21- to 34-year-old drivers are one of the National Highway Traffic Safety Administration's (NHTSA) crucial target groups in the effort to decrease alcohol-related fatalities.

Although it has been known that the 21- to 34-year-olds are a key target group, it has been difficult to develop programs targeting this specific age range. Many program and enforcement efforts are focused either on youth under age 21, or on the overall adult population.

In an effort to learn more about what can be done for these young adults, NHTSA conducted a research study to examine a community program targeted at 21- to 34-year-olds.

The study began with a look at several programs across the country. The Pueblo County, Colorado, *Smart Roads* program was selected because:

- It was targeted specifically at 21- to 34-year olds rather than all adult drivers;
- It had strong participation from a community-based treatment provider and worked closely with an existing city coalition, *Drive Smart*;
- It was already operational and thus could be evaluated during the course of the study;
- It had good records, including objectives, schedules, material costs, and specific plans of what it wanted to achieve, and how it was implementing the program; and
- It administrators were willing to participate in an objective evaluation of their program and have the information shared with others.

The *Smart Roads* Program

The *Smart Roads* program was funded through a grant provided by the Colorado Department of Transportation. A local controlled-substance abuse prevention and treatment center, Crossroads Managed Care Systems, Inc., administers the program.

At the time this study began, previous research had revealed that Pueblo ranked highest in DUI arrests per capita among Colorado cities, and that males between the ages of 21 and 34 accounted for 34 percent of all DUI arrests.

The previous research had also gathered data from focus groups and surveys and learned that a prime theme to deter Pueblo young adults from impaired driving was the fear of a DUI arrest and the monetary and personal costs associated with such an arrest. A campaign message of the "\$8,866 Hangover" had been developed to publicize the effects of a DUI arrest. This message was advertised on television, radio, newspapers, billboards, posters, table tents, and paycheck inserts.

Another large component was the "Buzzing and Tooling" educational program designed for blue-collar workers. The program involves three interactive, 50-minute sessions that focus on personal control, consequences, perceptions, and behavioral beliefs. Crossroads offers this training free to firms with blue-collar workers. These voluntary sessions can take place either at the company, or at Crossroads offices.

Study Methods

The study examined nighttime injury (NI) and nighttime single-vehicle injury (NSVI) State crash data. These measures were used in place of alcohol-related fatalities, because the fatal-crash numbers in a community the size of Pueblo are typically too small to allow for controlled statistical analyses. Both NI and NSVI crashes often serve as surrogate measures of alcohol-related crashes.

The primary jurisdiction of interest was Pueblo County, but given the media activity with the *Smart Roads* program, it was thought that there could be a spillover effect into neighboring counties. Moreover, in the case of the NSVI analyses, inclusion of the neighboring counties increased the stability of the statistical analyses. NI analyses were conducted with data from Pueblo County alone; NSVI analyses were

conducted with Pueblo County plus eight low-population surrounding counties. For both NI and NSVI crashes, comparison analyses were conducted with data of crash-involved drivers ages 21 to 34 in non-test counties. For the test group from Pueblo, the comparison group was all Colorado counties except Pueblo. For the test group of Pueblo and eight surrounding counties, the comparison group was all Colorado counties except Pueblo and those eight surrounding counties. The “before” data period was 1998-1999; the “after” period was 2000-2001.

Results

NI crashes for 21- to 34-year-olds as a percentage of all crashes involving that age group decreased 43 percent in Pueblo County from 10.9 percent in the before period, to 6.2 percent in the after period. This decrease was statistically significant ($p < .0001$). There was a slight but statistically significant increase in the comparison counties ($p = .004$).

Similar results were found when the data from Pueblo County was combined with that from the surrounding counties. NI crashes for 21- to 34-year-olds as a percentage of all crashes involving that age group decreased significantly from 13.2 percent to 9.7 percent ($p = 0.004$), while the comparison group had a slight but statistically significant increase.

For NSVI crashes in Pueblo County and the surrounding counties, there was a decrease from 8.0 percent to 6.9 percent. There was a slight increase in the comparison counties. These changes were not statistically significant.

How To Order

For a copy of, *Evaluation of Pueblo County, Colorado's Smart Roads Program* (43 pages including appendices), prepared by Mid-America Research Institute, write to the Office of Research and Technology, NHTSA, NTI-130, 400 Seventh Street SW., Washington, DC 20590; Send a fax to 202-366-7096; or download from www.nhtsa.dot.gov. Twila Lindsay and Amy Berning were the contract managers for this project.

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