

**Brief Analysis of Bernalillo County's Safe Ride Program**  
**Prepared by:**  
**Institute for Social Research, University of New Mexico**  
**Nalani Quinn and Paul Guerin, Ph.D.**  
**April 2006**

This brief report is designed to provide a preliminary cost benefit analysis of the Bernalillo County Safe Ride program. This analysis is based upon methodology developed by Professor Michael Rothschild of the University of Wisconsin to evaluate the effectiveness of Wisconsin Safe Ride programs. As stated by Rothschild in his Analysis Model used to evaluate Wisconsin's Safe Ride program:

For the purposes of this report, "effectiveness" is defined as the ability of the SafeRide program to avoid-alcohol related crashes and their associated costs. However, effectiveness must also be viewed in the context of other tools...SafeRide should not be seen as the "silver bullet" to eliminate all impaired driving but rather as one additional tool<sup>a</sup>.

The following analysis utilizes this model. It uses Bernalillo county data on DWI arrests and alcohol related crashes, Safe Ride data on provided rides and costs, data from a NHTSA DWI analysis, and data from Wisconsin's DWI analysis to estimate the cost-effectiveness of the Safe Ride program. First, data is used to estimate the number of crashes avoided by the Safe Ride program. Using this information, a cost-benefit analysis of the program is conducted.

Crash Avoidance Analysis for Bernalillo County

Currently we do not have complete crash avoidance data to provide an estimate of crash avoidance for 2005 and so we are only able to provide an analysis for calendar 2004. The calculation includes a number of data elements including the number of DWI arrests, an estimate of the number of drunk driving episodes, the number of alcohol related crashes, and an estimate of the percentage of bar patrons leaving bars legally impaired. The following are explanations of the analysis presented below.

The number of DWI arrests for Bernalillo County was obtained from an annual report published by the Division of Government Research at the University of New Mexico for the New Mexico Department of Transportation<sup>b</sup>. The number of episodes of drunk driving over the legal limit was obtained from a 2005 National Highway Traffic Safety Administration (NHTSA) report<sup>c</sup> where it is estimated that there is one arrest for every 88 episodes of driving over the legal limit. For calculation purposes, the number is rounded to 90 in the formula. Below, the above numbers are multiplied to obtain an estimate of the number of episodes of drunk driving in Bernalillo County in 2004.

This number is then divided by the number of alcohol related crashes. The number of alcohol related crashes in Bernalillo County was obtained from statistics available on the University of New Mexico's Division of Government Research's website<sup>d</sup>. The resulting number represents a crash to "episodes of drunk driving" ratio.

To final figure represents number of alcohol related crashes the safe ride program avoided. The number of Safe Rides is divided by the product of episodes of drunk driving and the percentage of bar patrons leaving bars legally impaired. The latter is an estimate borrowed from Wisconsin's 2004 Annual Report<sup>a</sup>, and represents the percentage of bar patrons who were impaired (five or more drinks for a man, four or more drinks for a woman) when they left the bar. Currently, no similar estimate exists for New Mexico.

Using the Rothschild method, it was determined that the Safe Ride program prevented approximately four alcohol-related crashes in calendar year 2004.

- 6,911 DWI arrests X 90 episodes (over legal limit) = 621,990 episodes of drunk driving;
- 621,990 episodes of drunk driving ÷ 1117 alcohol related crashes= 1 crash for every 557 episodes of drunk driving in Bernalillo County;
- 7774 Safe Rides ÷ 557 episodes of drunk driving X 28% (those impaired) = 4 alcohol-related crashes avoided.

Cost-Benefit Analysis

Cost per crash	\$98,000
Value of 4 crashes	\$392,000
Cost for Safe Ride in 2004	\$104,797
Cost savings	\$287,203

These cost-saving estimates are preliminary estimates for Bernalillo County in 2004; data are not yet available for 2005. As noted in the footnotes, these numbers were derived from numerous sources. Fiscal year expenditures were provided by the Bernalillo County DWI Program (the funding agency behind the Safe Ride Program), and averages of each month were used to provide the estimate by calendar year. The cost per crash figure was obtained from the NHTSA website. This number should be used as an approximate reference point, and should be interpreted with caution. This number may be higher because the cost per crash estimate does not include fatal alcohol-related crashes. The final estimate indicates that the Safe Ride program was cost effective in 2004—a total of \$287,203 was saved by the Safe Ride program in 2004.

## Works Cited

- <sup>a</sup> Wisconsin Department of Transportation Division of State Patrol, Bureau of Transportation Safety. 2005. *2004 Wisconsin SafeRide Annual Report and Evaluation*. Available at <http://www.unm.edu/~dgrint/>.
- <sup>b</sup> New Mexico Department of Transportation Programs Division Traffic Safety Bureau. 2005. *Driving While Impaired New Mexico 2004*. Available at <http://www.unm.edu/~dgrint/>.
- <sup>c</sup> National Highway Traffic Safety Administration's 1999 information on Impaired Driving in New Mexico. [http://www.nhtsa.dot.gov/people/injury/alcohol/impaired\\_driving\\_pg2/NM.htm](http://www.nhtsa.dot.gov/people/injury/alcohol/impaired_driving_pg2/NM.htm).
- <sup>d</sup> New Mexico Department of Transportation Programs Division Traffic Safety Bureau. Alcohol Involved arrests by county. <http://www.unm.edu/~dgrint/>.