An Evaluation of the 2006 Great Lakes Region Rural Safety Belt Initiative in Minnesota

David W. Eby
Jonathon M. Vivoda
John Cavanagh

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INTRODUCTION

Residents of rural areas are at greater risk of traffic-crash-related death or injury than those who reside in urban areas. While only about 21 percent of the United States' (US) population lives in rural areas and about 40 percent of total vehicle miles traveled are on rural roads, 60 percent of the US traffic fatalities occur on rural roads (National Highway Traffic Safety Administration, NHTSA, 2004). There are many factors that account for the over-representation of rural roads in fatal crashes including alcohol, high-speeds, vehicle rollovers, and greater delays in emergency services responding to crashes. Lack of safety belt use is also a contributing factor.

Great strides have been made in increasing safety belt use in the United States over the past decade. According to NHTSA, however, safety belt use in rural areas is less than use elsewhere (Glassbrenner, 2003). In 2002, rural belt use was 72 percent while urban use was 75 percent nationwide (Glassbrenner, 2003). These differences are even greater when certain vehicle types are considered. For example, belt use in pickup trucks was only 54 percent in rural areas compared to 69 percent in non-rural areas of the US (Glassbrenner, 2003).

Similar results are found in the Great Lakes Region of the US which includes Minnesota, Wisconsin, Illinois, Michigan, Indiana, and Ohio. In this region, about two-thirds of crash-related fatalities are in rural areas (Great Lakes Project, 2005). In 2003, of the 4,830 passenger vehicle occupant fatalities, 66 percent were rural, 55 percent of the rural fatalities were not belted, and 68 percent of all unrestrained fatalities were in rural areas (Great Lakes Project, 2005).

In order to target belt use promotion efforts to rural areas in the Great Lakes Region, NHTSA created the *Great Lakes Region Rural Safety Belt Demonstration Project* in January 2005 (later called the *Great Lakes Region Rural Safety Belt Initiative*). Based upon the successful formula of the *Click It or Ticket* (CIOT) program, the rural demonstration project was composed of highly visible enforcement efforts coupled with targeted outreach and media efforts throughout the Great Lakes Region (Great Lakes Project, 2005). The region-wide approach was designed to be implemented alongside

the CIOT campaign occurring in each state in the region. Three waves of the project were implemented: The first campaign occurred in May 2005 preceding the CIOT campaign; the second took place in collaboration with the Region's Operation CARE Thanksgiving 2005 holiday mobilization; and the third campaign took place in May 2006 immediately preceding the national CIOT campaign.

Minnesota participated in both the May 2006 CIOT campaign and the *Rural Safety Belt Initiative*. Minnesota was active in promoting the initiative. As part of the rural project, the Minnesota Office of Communication secured 54 on-air interviews on 33 radio stations for law enforcement officers involved in the initiative. Minnesota implemented several outreach activities including the following: Buckle Up/CIOT Post-it notes for enforcement agencies and Safe Communities; the Pizza Hut and Taco Bell franchises produced Buckle Up Post-It notes and window signs; a short article was written specifically for out-state young adults by the Minnesota State Colleges and Universities (MnSCU) system; a partnership was developed with CarSoup.com to post a sample driver's license test on their web site; a 30 second television PSA featuring Minnesota Twins manager Ron Gardenhire and three 30 second radio PSAs featuring former Twin's pitcher and current radio broadcaster Bert Blyleven were produced; and a newsletter featuring the RDP/CIOT enforcement and outreach efforts was produced. Minnesota also allotted CIOT grant money to nearly every rural county for overtime enforcement of the safety belt law.

The Minnesota Office of Traffic Safety (OTS) selected EPIC•MRA and consultants from the University of Michigan Transportation Research Institute to analyze data in order to evaluate the *Rural Safety Belt Initiative* activities implemented in Minnesota. This report documents the methods, data analysis and results.

METHODS

Unlike last year (Eby, Vivoda, & Cavanagh, 2005), this year's evaluation had no comparison sites in rural counties that were not targeted by the initiative's activities. Instead, Minnesota decided to target all rural counties with media and enforcement activities. The selection of sites for the analysis, therefore, was based on the site being located in a non-metro-area county and being included in the set of sites comprising the mini-survey. Thirty-six sites met these criteria.

Data for the rural demonstration project evaluation activities were collected at the same time as the May 2006 CIOT evaluation in Minnesota, which included three waves of data collection—before, during, and after the campaign. All data for this evaluation effort were collected by personnel trained by the OTS. Data collection followed the procedures utilized in the May 2006 CIOT evaluation (Eby, Vivoda, & Cavanagh, 2006).

Because sites were selected without respect to a statistical sample survey design, no weighting of data was conducted for this evaluation. Data among sites were combined and use-rates and variances were calculated. Chi-square tests were conducted to test for differences between rates as a function of survey wave.

RESULTS

The study results are summarized in Table 1. This table shows the percent belt use and number of observations (N) for each survey wave by overall, seating position, vehicle type, sex, and age. Also included is the chi-square (Π^2) statistic and probability value (P) calculated across survey waves. None of the P-values were significant, indicating that belt use did not change significantly among waves for overall or for any of the separate variables.

Table 1: Rural Safety Belt Use Rates as a Function of Survey Wave and Variable, and the Chi-Square Statistic Across Waves.

Variable	Wave 1 (April)		Wave 2 (May)		Wave 3 (June)		Statistic	
	% Use	N	% Use	N	% Use	N	Π^2 (DF)	P
Overall	81.1	1214	81.6	1266	81.1	1526	0.15 (2)	.930
Seating Position								
Driver	81.6	864	82.6	908	81.7	1222	0.40 (2)	.821
Passenger	80.0	350	79.1	358	78.6	304	0.20 (2)	.904
Vehicle Type								
Car	84.3	559	82.5	629	84.9	746	1.45 (2)	.484
SUV	84.0	243	87.8	237	80.5	251	4.81 (2)	.090
Van/Minivan	89.3	159	84.0	156	83.7	202	2.70 (2)	.259
Pickup	66.4	253	71.7	244	71.3	327	2.14 (2)	.343
Sex								
Male	76.2	654	76.8	667	76.9	852	0.12 (2)	.941
Female	87.3	557	87.2	594	86.3	670	0.34 (2)	.843
Age								
0-10	71.4	7	76.5	17	66.7	9	0.29 (2)	.864
11-15	81.8	22	80.0	15	93.8	16	1.42 (2)	.491
16-29	75.4	353	74.7	392	73.9	437	0.22 (2)	.896
30-64	83.3	683	83.1	685	82.0	828	0.52 (2)	.771
65+	85.6	146	93.6	155	90.6	234	5.42 (2)	.067

DISCUSSION

This study was designed to determine if the *Great Lakes Region Rural Safety Belt Initiative* activities in Minnesota increased use of belts. We investigated this issue by analyzing direct observation data collected before, during, and after the project activities in data collection sites located in rural parts of Minnesota.

The study found that overall belt use did not change significantly across the three survey waves, indicating that the program activities did not change belt use enough to be detected by this study design. One weakness with the evaluation design is that there were no comparison sites utilized in the study. It is possible that if the rural areas of Minnesota did not receive the extra enforcement and media, belt use would have fallen during the three waves. Without comparison sites where no activity is taking place, one cannot rule out this possibility.

Regardless of the evaluation outcomes, the study did find low belt use, supporting the notion that rural areas should be targeted with belt use promotion programs. This study indicates that continued effort should be applied to increase belt use in Minnesota's rural areas. While the results do not point to the effectiveness of the *Great Lakes Rural Safety Belt Initiative* in increasing belt use in rural Minnesota, the study has several limitations that may have prevented us from determining the effect of the program in the targeted area. Further evaluation of this program is, therefore, recommended.

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