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Evaluation of a Rural Seat Belt Demonstration Program in Florida, Georgia, and Tennessee

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16. Abstract Three southeastern States initiated high-visibility enforcement campaigns to address lower seat belt use in their rural areas than in non-rural areas. Florida, Georgia, and Tennessee conducted four waves of intensified enforcement and media from November 2008 to May 2010. The May campaigns were conducted just prior to the national <i>Click It or Ticket</i> campaigns. Combining activity, awareness and usage data from all three States, there was a significant positive correlation between <i>media expenditures</i> and <i>awareness of rural seat belt messages</i> . Two awareness indices correlated highly with usage and achieved statistical significance: <i>awareness of rural seat belt messages</i> and <i>perceived risk of a ticket for not buckling up</i> . While the significant correlations between awareness measures and belt usage suggest that the message got through to drivers, comparison of changes in belt use in the RDP versus the control areas produced mixed results. Seat belt usage increased significantly in the targeted rural areas of all three States, but it also increased at about the same rate in the control areas in two of the States. Only Georgia provided evidence of a rate of increase in rural usage greater than experienced in the control area, which may have been partially due to the use and public awareness of checkpoints.					
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EXECUTIVE SUMMARY

Nationally, daytime seat belt use reached 88.5% in 2015, but individual State belt rates varied from 69.5% to 97.3%. And within individual States, rural areas usually have lower rates. Strong seat belt laws and highly visible enforcement by State and local law enforcement remind drivers to buckle up on every trip, but some drivers still do not get the message.

Three southeastern States conducted a coordinated rural demonstration program (RDP) to increase seat belt use in targeted rural areas. Florida targeted 36 northern counties. Georgia selected 22 southern and northeastern counties, and Tennessee selected 18 central and eastern counties. The RDP used a high-visibility enforcement (HVE) model that included intensified enforcement and publicity in the form of paid and earned media. The States conducted four waves of enforcement and publicity from November 2008 to May 2010. Florida and Tennessee implemented two RDP waves without any additional activity and implemented two waves prior to May *Click It or Ticket* (CIOT) mobilizations. In Georgia every wave of enforcement had both a rural targeted area component and a statewide CIOT component.

The strongest evidence of impact in RDP areas involved changes in awareness and perceptions related to enforcement and media activities. In Florida *awareness of rural seat belt messages*, *perceived risk of a ticket for not buckling up*, and the *perception of strict enforcement of seat belt laws* increased significantly in the RDP area. In Georgia *awareness of rural seat belt messages* and *awareness of seat belt use checkpoints* increased significantly in the RDP area. Tennessee experienced significant increases in *awareness of rural seat belt messages* during Waves 2 and 3, but the RDP area did not sustain the increased awareness through Wave 4.

Combining activity, awareness, and usage data from all three States, there were no significant correlations between citation rates and awareness indices. However, there was a significant positive correlation between *media expenditures* and *awareness of rural seat belt messages*. None of the relationships between activities and belt usage achieved statistical significance. Two awareness indices correlated highly with usage and achieved statistical significance: *awareness of rural seat belt messages* and *perceived risk of a ticket for not buckling up*.

While the significant correlations between awareness measures and belt usage suggest that the message got through to drivers, comparison of changes in belt use in the RDP versus the control areas produced mixed results. Seat belt usage increased significantly in the targeted rural areas of all three States, but it also increased at about the same rate in the control areas in two of the States. Only Georgia provided evidence of a rate of increase in rural usage greater than experienced in the control area, which may have been partially due to the use and public awareness of checkpoints.

It is likely that States can achieve additional gains in reaching high-risk people using this RDP experience and the documentation of activity and impact provided in this evaluation to further their efforts.

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I. Background

A. Impact of High-Visibility Enforcement Programs

In the United States an emphasis on high-visibility enforcement (HVE) to increase seat belt use began soon after New York enacted the first seat belt law. By 1985 Albany and Elmira, New York, were implementing HVE demonstrations (Rood, Kraichy, & Carmen, 1987; Williams, Lund, Preusser, & Blomberg, 1987). Not surprisingly, the increases in observed usage associated with these local efforts were large (13 and 28%, respectively). It was the first time such programs had been implemented, and baseline usage rates were low (around 50%). The Elmira effort also appears to have been the first time that an HVE demonstration used paid media to supplement seat belt enforcement efforts. The program spent about 26¢ per capita for paid media. Enforcement centered on the use of checkpoints or roadblocks, and although officers frequently issued warnings, the checkpoints created significant media interest and public awareness.

1. Local Programs

Since Albany and Elmira, there have been more than a score of local HVE programs (Nichols & Ledingham, 2008). While Elmira remains one of the most effective of these efforts, some programs achieved even greater gains, with the largest increase occurring in Haywood County, North Carolina. The Haywood County effort was a rural program implemented in 1992 as a pilot for North Carolina's 1993 statewide *Click It or Ticket* program. The pilot included paid media of about 38¢ per capita (16¢ per week over two weeks). A combination of checkpoints and targeted patrols resulted in about 300 citations for non-use of seat belts per 10,000 residents. The combination of a relatively novel approach, a low baseline, high-intensity media, and the use of checkpoints resulted in a 41 point increase in usage. This gain was greater than in two pilots conducted simultaneously in more urban areas.

2. North Carolina

In 1993 North Carolina implemented its multi-year statewide CIOT program, characterized by extensive use of checkpoints, nearly 60,000 citations (about 81 per 10,000 residents over a total of 15 weeks), and \$600,000 in paid media (8¢ per capita over 15 weeks). This statewide effort resulted in a 17-point increase in usage from a modest baseline of about 63% usage. Larger gains were found in rural areas, which generally had lower starting rates.

3. National Mobilizations

After several years of effort by the National Highway Traffic Safety Administration to stimulate similar statewide programs in other States, the combination of a crisis involving air bags and children and a substantial amount of federal funding made available to States as part of an innovative grant program resulted in a series of national mobilizations beginning in 1997. First called *Operation ABC* and later called the *National CIOT Mobilizations*, these events provided the stimulus and the foundation for more than 40 States to conduct annual statewide mobilizations to increase seat belt use. Hundreds of such efforts have been implemented since 2000. Evaluations of early mobilizations, including an 8-State regional CIOT program in the

southeast and 10 State programs implemented across various regions, showed strong and consistent increases in belt use that averaged about 8.5 percentage points (Solomon, 2002; Solomon, Ulmer, & Preusser, 2002).

B. HVE Activity, Awareness, and Changes in Usage

Nearly all States have now implemented HVE efforts as part of the national campaign for more than a dozen years. While baseline usage rates have increased, there are some indications that motivation on the part of police agencies may be lower than when these efforts first began. Recent gains have been more modest than in earlier HVE years. While recent mobilizations have had high levels of enforcement with averages above 20 citations per 10,000 residents, they seldom include checkpoints. In addition, public awareness of enforcement generally hovers between 40 to 50%, much lower than the 85% awareness of checkpoints in North Carolina.

Hedlund, Gilbert, Ledingham, and Preusser (2008) examined the characteristics of States with high and low belt use rates during the 2005 CIOT mobilization. They found that: (1) high-use States issued about twice as many seat belt tickets per capita as low-use States; (2) low-use States spent about 40% more per capita on paid media than high-use States; and (3) more respondents from high-use States than from low-use States thought that seat belt enforcement was important and that the risk of getting a ticket for non-use was high. These researchers concluded that the most important difference between high-use and low-use States was enforcement rather than demographics or dollars spent on media. They pointed out that while it is possible to achieve a high-use rate in a secondary law State, it is harder to do so because of the difficulty in enforcing a secondary law. Of six States that had recently upgraded to primary enforcement, all experienced immediate and significant increases in usage following passage of the law. While enforcement was the most important element in distinguishing between high-and low-usage States, an effective publicity program was also a key factor in achieving high use.

A recent study on the issue of HVE mobilizations provides benchmarks for evaluating these programs (Tison & Williams, 2010). The researchers examined the impact of CIOT mobilizations from 2003 to 2006 and reported that the peak years for funding of media and enforcement activity were 2004 and 2005. Media expenditures were generally 9¢ to 12¢ per capita, slightly higher than in earlier reports. The number of citations issued during CIOT mobilizations remained relatively stable with 21 to 24 per 10,000 residents.

There was little or no increase in baseline levels of *awareness of special seat belt* enforcement (about 16% in 2003 and 17% in 2007) or *awareness of messages to buckle up* (which was already high at 73% to 74%), but there were significant increases in these (and other) measures before and after each mobilization. *Awareness of enforcement* increased from 16% to 40% in 2003 (+24 points) and from 17% to 49% in 2007 (+32 points). *Awareness of messages to buckle up* increased from 73% to 82% in 2003 (+9 points) and from 74% to 80% in 2007 (+6 points). During the time period when increases were noted (2003 to 2007), there were increases in media expenditures (at least through 2005), but there were also relatively stable levels of enforcement. Media expenditure rates and enforcement citation rates were not correlated.

Tison and Williams looked specifically at the relationships between media, enforcement, and changes in seat belt use. Their analyses showed a mild relationship between *media expenditures*

and *changes in usage* ($r = 0.29$, $p = 0.045$) but found a stronger relationship between *citation rate* and *changes in usage* ($r = 0.43$, $p = 0.002$).

Using a combined index of *change in usage*,¹ Tison and Williams compared media and enforcement rates in 5 States with the largest increases in usage with rates in 5 States with the smallest increases. There was no difference between the high-change and low-change States in terms of media expenditures (46¢ - 48¢ per capita in both groups), but high-change States issued more citations per 10,000 residents (103) than low-change States (68). This finding suggests a positive relationship between enforcement levels and changes in usage.

These researchers also examined the results of national and State awareness surveys and found significant increases in key awareness indices from 2003 to 2007, but these increases were not significantly different in high-change and low-change States. In other words, enforcement and media appeared to result in increases in awareness indices, but awareness indices alone did not differentiate between high-change and low-change States.

There were indications that media, enforcement, and changes in usage varied by law type. In primary-law States, media and enforcement were not significantly correlated with change in usage. However, the combination of media and enforcement was significantly related to increased usage.

C. Rural Seat Belt Use

After 12 years of national HVE mobilizations, occupants most likely to be involved in fatal or serious-injury crashes still have much lower usage rates than motorists who are less likely to be involved in such crashes. The lowest rates of seat belt use are found in secondary law States, among occupants of pickup trucks, and on rural roads. Observed belt use among teenagers is also low, particularly among young males. Seat belt usage among fatal crash victims declines precipitously at night, particularly among victims who have been using alcohol. To address these high-risk, low-use groups, NHTSA has implemented targeted HVE demonstration programs, frequently pairing them with CIOT mobilizations. NHTSA has completed demonstrations targeting pickup truck occupants, teens and nighttime motorists.

The rural population is of particular concern since a high percentage of fatalities, both buckled and unbuckled, occur in rural areas or on rural road segments. To the extent that HVE programs can affect high-risk groups, they are more likely to be associated with increases in belt usage among such groups. Demonstrations in the Southeastern United States have shown that occupants of pickup trucks can be affected to a greater degree than occupants of other vehicles (Tison et al., 2008). A rural HVE program in the Great Lakes Region demonstrated that a combination of enforcement and media focused on rural motorists can increase seat belt usage among such motorists (Nichols, Ledingham, & Preusser, 2007). In particular, belt use increased more for males and for occupants of pickup trucks than other motorists.

¹ This *combined index* included observed use, conversion rate for observed non-use (i.e., percentage of non-users converted to users), and usage among fatally injured occupants.

II. Program Implementation

A. Program Coordination

In 2008 Florida, Georgia and Tennessee initiated a combined rural seat belt program. A coordinating committee for the project included a point-of-contact designated by each of the three State Highway Safety Offices (SHSOs), representatives from NHTSA headquarters and regional office, and staff from the three contractors involved in the project (Tombras Group for media support, Preusser Research Group or PRG for evaluation, and Mercer Consulting Group or MCG for project coordination).

B. Program Components

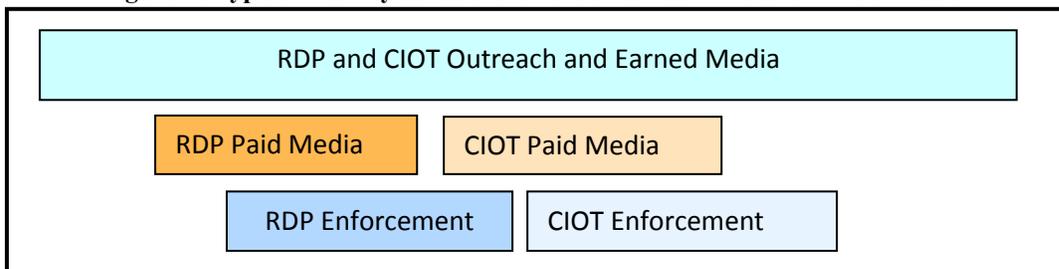
This new Rural Demonstration Program (RDP) was scheduled to precede the May *Click It or Ticket It* mobilizations in 2009 and 2010 as well as during two additional periods in November. The RDP consisted of the following major components:

1. Paid media and earned media efforts to publicize the activity waves and to raise public awareness of enforcement.
2. Recruitment of law enforcement agencies in each State to conduct intensive safety belt enforcement, usually during the second week of a 2-week RDP paid media campaign.
3. Selection of key media markets that serviced rural areas for the placement of media ads and to provide an umbrella for the targeting of enforcement, earned media, outreach and evaluation activities.
4. Outreach and coordination with other traffic safety partners to further supplement the publicity obtained via paid and earned media efforts.
5. Evaluation activities designed to measure level of activity, changes in public awareness, and changes in observed seat belt usage.

D. CIOT Model

Each RDP program was based on the *Click It or Ticket* model for conducting HVE programs. This model emphasizes phased implementation of highly visible enforcement, with outreach, earned media and paid media designed to make the public aware of enforcement activity. The program begins with outreach and earned media that (ideally) continues throughout the duration of the program. Paid media then provides 1 to 2 weeks of intense paid advertising that emphasizes the enforcement. One week of on-the-road seat belt enforcement begins several days after the launch of the paid media campaign. Figure 1 shows the scheduling of a typical RDP when combined with a CIOT mobilization. The rural messaging and enforcement begin before the statewide CIOT messaging and enforcement.

Figure 1: Typical Activity Schedule for a Combined RDP/CIOT Mobilization



E. Targeted Areas

The three States implemented the RDP in targeted areas. The States selected these areas on the basis of (1) the rural composition of counties as measured by the percentage of each county designated by census data as being predominantly rural; (2) the number of unbuckled deaths, (3) whether enforcement grants, resources, or networks were already in place, (4) the availability of media outlets, and (5) the costs of advertising.

Florida selected 36 counties in the northern part of the State as the targeted area. These counties accounted for 20% of the State’s population and had six designated market areas (DMAs): Gainesville, Jacksonville, Mobile, Orlando, Panama City, and Tallahassee. Four counties in south-central Florida served as control or comparison counties where no RDP-related media or enforcement was conducted. These were in the Tampa and Fort Meyers DMAs and represented slightly less than 1% of the State’s total population. Like the rural areas, however, all the control counties were exposed to national and statewide CIOT media and enforcement each May.

Georgia selected 32 counties for the RDP targeted area. These counties were located in the southern part of the State, primarily in the Albany and Savannah, Georgia, media markets and the Tallahassee and Jacksonville, Florida, media markets and in the northeastern area, including portions of the Atlanta, Georgia as well as Greenville and Augusta, South Carolina, markets. Five counties in the Macon DMA served as control counties.

The Tennessee Highway Department selected 18 target counties in three primary market areas: Chattanooga, Knoxville, and Nashville. Two counties, Fayette and Tipton, served as the control areas. Maps of all three States showing targeted and control counties are in Appendix A.

F. Implementation Schedule

Georgia and Tennessee initiated the first wave of the RDP efforts in November 2008, and Florida implemented Wave 1 in March 2009. After this initial wave, however, all three States conducted the remaining waves at essentially the same times. Wave 2 (W2) was conducted in May 2009, just prior to the CIOT mobilization. Wave 3 (W3) was conducted in November 2009, prior to the Thanksgiving holiday (and a November CIOT mobilization in GA). Wave 4 (W4) was

conducted in May 2010, just prior to the CIOT mobilization. Table 1 summarizes the implementation schedule.

Table 1: Implementation Schedule

State	Wave 1	Wave 2	Wave 3	Wave 4
Florida	March 2009	May 2009	November 2009	May 2010
Georgia	November 2008	May 2009	November 2009	May 2010
Tennessee	November 2008	May 2009	November 2009	May 2010

III. Methods

The primary objectives of this evaluation were to document the types and levels of RDP and CIOT activities that each State implemented and to assess the impact of combined RDP and CIOT activities on key public awareness and perception indices as well as observed seat belt use. The basic design measured awareness and seat belt use at baseline and after each program wave for a total of five measurements. Various events resulted in two additional measurements in Florida (after Florida upgraded to a primary law and before RDP activities at W3 and W4) and one additional measurement in Georgia (after the RDP at W2). Measurements were taken in both targeted rural and control areas.

A. Measuring Activity (Process Evaluation)

Contractors collected media activity data for each phase (RDP and CIOT) of each program wave. Media documentation focused on expenditures for paid media, number of ads aired, number of media events held, number of news stories documented, and gross rating points (GRPs) achieved (per market, per week). The State Highway Safety Offices and their media contractors provided these data. PRG accessed CIOT media data from NHTSA’s Mobilizations and Crackdowns database. MCG monitored the States and aided PRG in the collection of data for the RDP waves. State media contractors also conducted post-buy analyses to estimate number of ads and GRPs achieved.² Media indices were normalized by population so that comparisons could be made.

Enforcement data were also collected for each wave of activity. Data collected included the number and proportion of total enforcement agencies participating in each phase of the mobilization, estimated number of hours worked on seat belt enforcement, and the number of citations issued for seat belt and child restraint violations. Participating enforcement agencies collected the majority of these data as part of grant requirements. MCG closely managed the delivery of RDP enforcement data and provided the data to PRG. The delivery of CIOT enforcement data was part of annual CIOT reporting requirements. Similar to media data, PRG accessed enforcement data from NHTSA’s Mobilizations and Crackdowns database and then normalized by population.

² *Gross Rating Points (GRPs)* represents the percentage of the target audience reached by an advertisement. If an ad appears more than once, the GRP represents the sum of appearances. For example, if a television add reaches 50% of the target audience and is aired 5 times, it would have a GRP of 250, i.e., *frequency* (5) multiplied by *reach* (50% of target audience).

B. Measuring Public Awareness (Impact Evaluation)

Florida and Tennessee conducted motorist surveys at driver licensing (DMV) centers to measure changes in public awareness and perceptions associated with both rural and CIOT activity. Georgia conducted random digit dial (RDD) telephone surveys. All DMV survey respondents were motorists who were visiting selected licensing centers. DMV staff administered the surveys using forms and procedures developed and provided by PRG. The survey forms were one-page, paper-and-pencil surveys, with questions developed for use in other CIOT mobilizations (see Appendices B and C). Usually, customers completed these surveys while waiting for photos to be taken or to be called for service. The University of Georgia's Survey Research Center (SRC) conducted RDD telephone surveys (see Appendix D). The SRC adapted the questions used in the telephone surveys from surveys developed by NHTSA for CIOT mobilizations and impaired driving crackdowns.

C. Measuring Observed Seat Belt Use (Impact Evaluation)

Rural observational surveys were developed for 45 RDP sites and 30 control area sites to measure seat belt use, primarily on rural road segments. PRG worked with the SRC in Georgia and with the Transportation Research Center (TRC) at the University of Tennessee to develop sample plans for the identified target and control areas in those two States. PRG developed the sampling plan for both the RDP and control surveys in Florida. SRC and TRC conducted the target-area surveys in Georgia and Tennessee, respectively, while PRG conducted the target-area surveys in Florida (see Appendix E for sample form) and the control-area surveys in all three States. The procedures used in conducting these rural surveys followed the same guidelines used for conducting annual statewide surveys.

D. Analyses

The analyses used basic descriptive statistics and comparisons with national and RDP benchmarks to describe the results of media and enforcement activity (i.e., process evaluation). Trends in awareness and observed seat belt use were documented, and both incremental (wave-to-wave) and cumulative changes were tested for statistical significance primarily with chi-square tests. Correlation coefficients were calculated for various combinations of activity, awareness, and usage rates. T-tests were used to determine statistical significance of these relationships. Finally, linear regression analyses were used to compare levels and trends in targeted and non-targeted areas.

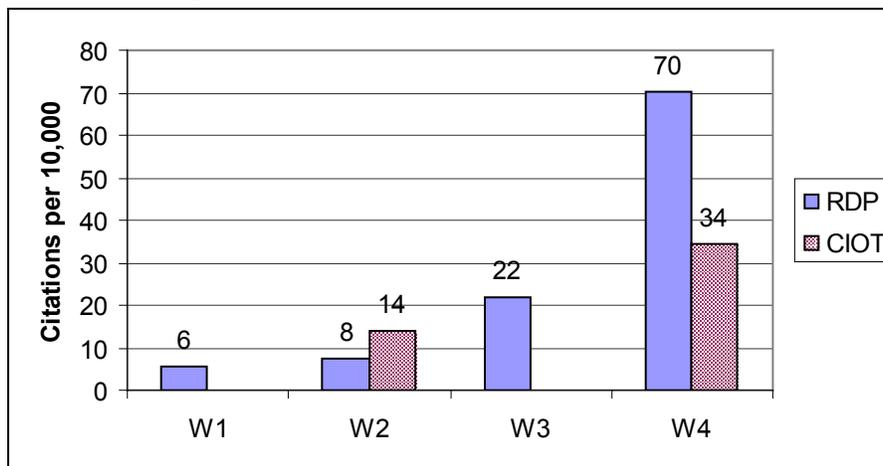
IV. Results

Following are summaries of RDP and CIOT activities in all three States.

A. Enforcement

Florida's law enforcement agency participation rates in the targeted counties ranged from 49 to 98%. The two May rural waves implemented before national CIOT mobilizations had the highest participation rates (Wave 2 at 97% and Wave 4 at 98%). The two independent RDP waves in March and November had lower rates (Wave 1 at 49% and Wave 3 at 54%). Citation rates were highest during Waves 3 and 4 (22 and 70 citations per 10,000 residents, respectively), following implementation of the State's primary law upgrade. Figure 2 shows citation activity by phase (RDP and CIOT) and by wave.

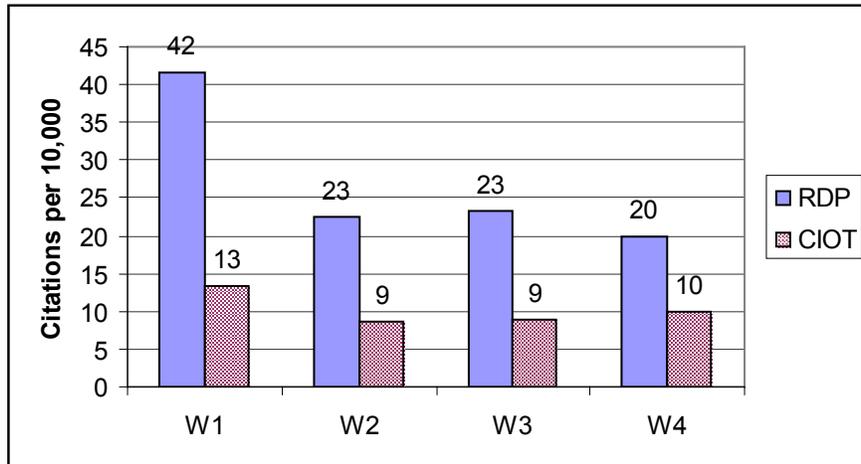
Figure 2: RDP and CIOT Citation Rates in Florida



Note: W1 conducted in March 2009, W2 in May 2009, W3 in November 2009, and W4 in May 2010.

Georgia's law enforcement agency participation rate averaged 29% over the course of the program. Wave 1 had the lowest rate (12%), and Wave 2 had the highest (47%). Waves 3 and 4 fell in the middle (29%). Citations rates per 10,000 residents averaged 27, ranging from a high of 42 in Wave 1 to a low of 20 in Wave 4. Figure 3 shows higher citation rates for the RDP than for CIOT, despite a higher CIOT participation rate. The first wave of enforcement activity resulted in the highest citation rates (RDP and CIOT combined); fewer citations were issued in subsequent waves.

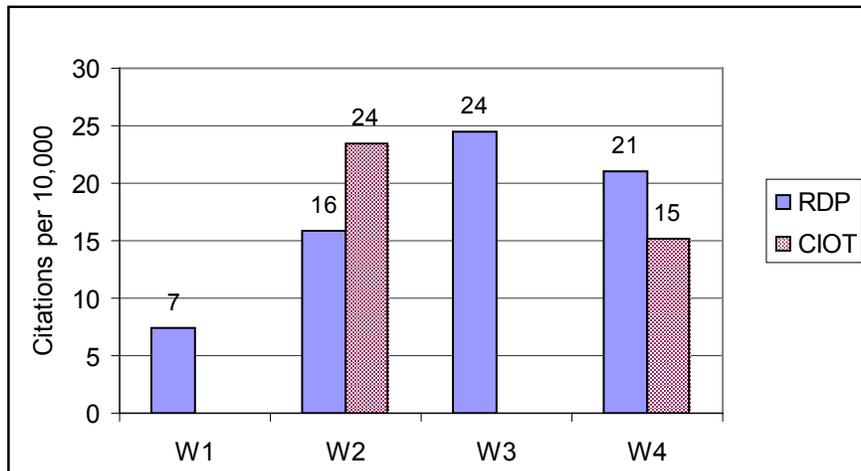
Figure 3: RDP and CIOT Citation Rates in Georgia



Note: W1 conducted in November 2008, W2 in May 2009, W3 in November 2009, and W4 in May 2010.

Tennessee’s law enforcement participation rate averaged 13%, increasing from a low of 11% in Wave 1 to a high of 15% in Waves 3 and 4. Tennessee reported an average of 18 checkpoints per wave over the course of the program, likely adding to the visibility of the RDP enforcement. The citation rate per 10,000 residents averaged 17, ranging from 7 in Wave 1 to 24 in Wave 3. Figure 4 shows citation rates by phase across all four waves.

Figure 4: RDP and CIOT Citation Rates in Tennessee



Note: W1 conducted in November 2008, W2 in May 2009, W3 in November 2009, and W4 in May 2010.

B. Media

1. Paid Media

Florida's per capita spending was stable throughout the RDP mobilization, ranging from 3¢ to 4¢. Florida spent approximately the same amount (per capita) on RDP media in north Florida during Waves 2 and 4 (4¢ per capita) as it did on CIOT (3¢ to 4¢). However, the RDP funding produced several times more ads (6 to 8 per 10,000 residents) than the statewide CIOT effort (about 2).

Georgia's per capita spending was stable throughout the RDP, ranging from 22¢ to 25¢. On average, Georgia spent more per capita on RDP media than on CIOT media (average of 23¢ on RDP; 3¢ on CIOT). As a result, the RDP produced more ads (40 to 130 per 10,000 residents) than CIOT (about 17).

Tennessee, like Georgia, spent more per capita on the RDP than on CIOT, although spending declined at W4 for both the RDP and CIOT. RDP spending ranged from 22¢ per capita in Wave 4 to 34¢ in Wave 2. Combined RDP/CIOT expenditures were highest in Wave 2 (42¢) and lowest in Wave 4 (26¢).

2. Gross Rating Points (GRPs)

In Florida the average number of GRPs achieved per market per wave was 423 (W1), 368 (W2), 325 (W3), and 457 (W4).³ In addition, these same markets were targeted as part of the two-week CIOT phase during Waves 2 and 4. This provided additional exposure to seat belt and enforcement messaging in these four markets. Per market averages were 331 in Wave 2 and 362 in Wave 4. Both the RDP and CIOT GRP levels would be considered "moderate" in terms of campaign strength.

In Georgia eight DMAs were originally targeted for RDP media funds, but only four of these markets were funded after the first wave. The four DMAs were Albany, Savannah, Atlanta, and Augusta. CIOT media were also purchased in these same markets (and in the Macon DMA control market). The average number of GRPs achieved in each of these markets was 528 (W1), 693 (W2), 643 (W3), and 503 (W4). This would be considered to be a "very strong" media effort. All four of these DMAs were also targeted during each CIOT phase of each wave. This resulted in an additional exposure to seat belt information in the targeted area. The average number of GRPs achieved per market during CIOT was 607 (W1), 671 (W2), 495 (W3), and 656 (W4). This represented another "very strong" media effort.

In Tennessee RDP-related media were purchased in three primary RDP markets: Nashville, Knoxville, and Chattanooga. In addition, there were smaller buys in the Jackson and Huntsville DMAs. The three primary markets also received media exposure associated with CIOT phases of those mobilizations. There was an average of 455 GRPs across RDP waves, a "strong" media effort. In addition, residents in these markets were exposed to additional GRPs over 400 during the CIOT phases of Waves 2 and 4, both "moderate-to-strong" media efforts. Wave 2 was the

³ In some cases, components of these GRPs were estimated, based on media plans or media purchase reports.

strongest in terms of GRPs (RDP, CIOT, and combined). Residents of the Memphis DMA (the control area) were also exposed to 523 GRPs in Wave 2 and 463 GRPs in Wave 4, both of which were “strong” efforts.

3. Earned Media

In Florida the number of RDP-related news stories and articles increased from 12 to 15 per one million residents from Waves 1 and 2; peaked at 27 per million during Wave 3; then declined slightly to 21 per million in Wave 4. Combining RDP and CIOT stories, however, the *total* number of stories (per million residents) was highest during the two May mobilizations (55 during W2 and 60 during W4). News events ranged from one to two events (per million residents) per wave.

In Georgia the number of RDP news stories increased from approximately 20 during the first wave to about 50 during Wave 2. It then declined to 35 during Wave 4. Additional articles and events were likely associated with each CIOT phase. There was an average of five news events per wave.

In Tennessee the number of RDP-related news stories increased from 11 in the first two waves to 89 in Wave 3, before declining to 14 in Wave 4. News events ranged from zero (W1) to four (W4) during the RDP. Combining RDP and CIOT, there were 21 news stories during Wave 2 and 15 during Wave 4.

C. Public Awareness and Perceptions

Table 2 shows the cumulative increases in public awareness in Florida from before the program began (baseline) for both drivers in the targeted rural areas and those in the control areas. For those in the targeted rural areas, there were statistically significant cumulative increases above the baseline in 20 of 24 cells (83%) whereas the control group experienced statistically significant increases in only seven of the 24 cells (29%). Most of the significant increases in the control area occurred during Waves 2 or 4, which included the national and statewide CIOT. The most consistent differences between program and control areas were for awareness of rural seat belt messages (Waves 3 and 4), perceived risk of a ticket for not buckling up (Waves 2, 3 and 4), and the perception of strict enforcement of seat belt laws (Waves 2, 3 and 4).

Table 2: Cumulative Changes in Awareness Indices in Florida

Awareness/Perception Index	Area	W1	W2	W3	W4
Saw/Heard about Special Enforcement	RDP	+10.6*	+10.9*	+29.4*	+29.6*
	Control	+0.3	+17.1*	+14.2*	+22.6*
Saw/Heard General Seat Belt Messages	RDP	+10.0*	+20.2*	+21.9*	+19.6*
	Control	+2.8	+16.2*	+9.8*	+14.7*
Saw/Heard Rural Seat Belt Messages	RDP	+3.5	+3.5	+8.0*	+15.7*
	Control	+2.2	+4.0	+0.6	+3.8
Risk of a Ticket for Not Buckling Up	RDP	+6.8*	+11.1*	+16.6*	+10.1*
	Control	+8.9 [√]	+1.1	+4.6	+1.0
Personally Experienced Enforcement	RDP	+9.7*	+1.5	+27.4*	+12.2*
	Control	+3.7	+4.4	+3.2	+9.7*
Perceive Strict Enforcement of SB Law	RDP	+3.1	+12.0*	+12.7*	+10.7*
	Control	+6.3 [√]	-0.9	+1.6	+6.0
* asterisk (and darker shading) indicates a significant <i>cumulative increase</i> over baseline level; [√] check mark (and lighter shading) designates a <i>cumulative increase</i> with p value > 0.05 but < 0.10.					

With regard to the five indices examined in Georgia, Table 3 shows that drivers in the targeted rural areas reported statistically significant increases over the baseline in 14 of 20 cells (70%). The control group experienced significant increases in only three of 20 cells (15%). The most consistent difference between program and control areas was about awareness of checkpoints (Waves 1, 2, 3 and 4) followed by awareness of special enforcement (Waves 1, 2 and 3).

Table 3: Cumulative Changes in Awareness Indices in Georgia

Awareness/Perception Index	Area	W1	W2	W3	W4
Saw/Heard about Special Enforcement	RDP	+11.4*	+16.7*	+13.3*	+11.9*
	Control	+3.7	+1.4	+5.4	+10.1*
Saw/Heard General Seat Belt Messages	RDP	+5.3*	+15.7*	3.5	+14.1*
	Control	+2.6	+11.6*	-0.5	+12.5*
Saw/Heard Rural Seat Belt Messages	RDP	+4.9*	+10.0*	+4.6 [√]	+16.1*
	Control	-4.2	+1.3	-7.3 [√]	+2.0
Risk Ticket for Not Buckling Up	RDP	-0.9	-0.6	-1.4	+2.6
	Control	+0.6	-7.9	-0.4	+4.9
Saw/Heard about Checkpoints for SBU	RDP	+6.0*	+6.8*	+6.7*	+8.5*
	Control	+5.0	-0.4	+0.1	-1.1
* asterisk (and dark shaded area) indicates significant <i>cumulative increase</i> over baseline. [√] check mark (and lighter shading) designates a <i>cumulative increase</i> with p value > 0.05 but < 0.10.					

In Tennessee there were fewer significant results in both areas because of a smaller number of respondents than in Florida and Georgia. This was at least partially due to the closing of some of

DMV centers and reduced staff in others.⁴ In spite of this limitation, Table 4 shows significant cumulative increases in five of the 24 cells for the RDP group (21%), compared with no significant increases in the control group (0%). Only one measure, awareness of rural seat belt messages, experienced a statistically significant increase at the 0.05 level across two waves (Waves 2 and 3), but the RDP area did not sustain the increase in Wave 4.

Table 4: Cumulative Changes in Awareness Indices in Tennessee

Awareness/Perception Index	Area	W1	W2	W3	W4
Saw/Heard about Special Enforcement	RDP	-0.3	+14.9*	+7.1	+3.1
	Control	-8.8*	+7.4	-5.6	-3.9
Saw/Heard General Seat Belt Messages	RDP	+3.6	+8.6*	+6.6	+4.0
	Control	-7.0 ^v	+5.9	-4.9	+1.6
Saw/Heard Rural Seat Belt Messages	RDP	+6.7	+13.9*	+13.1*	+6.0
	Control	+2.0	-3.3	-8.0*	-6.2
Risk of a Ticket for Not Buckling Up	RDP	-8.2 ^v	-7.6	-12.4*	-9.8 ^v
	Control	-3.4	-8.4*	-16.3*	-11.0 ^v
Personally Experienced Enforcement	RDP	-0.6	+11.9*	+8.8 ^v	-2.3
	Control	-0.9	-0.8	-3.5	-4.3
Perceive Strict Enforcement of SB Law	RDP	-4.4	+5.2	-0.8	-7.0
	Control	-4.1	-3.5	+1.2	-5.1

* indicates significant change; * (+ shaded cell) indicates a significant *cumulative increase*
^v indicates p value > 0.05 but < 0.10; light shading represents an increase.

Another question of interest is whether enforcement or media activity was associated with increases in awareness. In Florida there was a modest but non-significant correlation between citation rate and per capita media expenditures ($r = 0.52$, $p = 0.37$). Table 5 shows a significant correlation between citation rate and awareness of rural seat belt messages ($r = 0.89$, $p = 0.05$), but no other awareness/enforcement relationship was significant. There were no significant correlations between media expenditures and any of the awareness/perception indices.

Table 5: Correlations Between Activity and Awareness in the Florida RDP

Awareness Indices	Correlation with Citations		Correlations with Media \$	
	r	p value	R	p value
Special Enforcement	0.61	ns	-0.32	ns
Experienced Enforcement	0.12	ns	-0.74	ns
Risk of Ticket	0.16	ns	-0.56	ns
Seat Belt Message	0.37	ns	-0.30	ns
Rural Seat Belt Message	0.89	0.05	0.07	ns
Strict Enforcement	0.37	ns	-0.20	ns

Note: Citation and media rates include both RDP and CIOT activity; media estimates do not include value of PSAs.

⁴ The RDP was conducted in very rural counties, many of which did not have a DMV licensing center within their borders. To sample a sufficient number of respondents, the State conducted surveys in some counties that were adjacent to the targeted counties. However, a review of the data from these adjacent counties showed slightly different response patterns. The data used for these analyses was restricted to centers that were within targeted counties, limiting the sample size but providing the most valid target group data.

Even though only one of the correlations between enforcement and awareness was positive, there is a suggestion that enforcement was a more influential factor than media in terms of desired changes in awareness and perceptions. Florida’s media expenditures remained relatively unchanged from modest baseline levels in May 2008, while enforcement increased dramatically after the second wave in November 2009.

Table 6 shows the relationships between awareness measures, citation levels, and media expenditures in Georgia. In Georgia, awareness of special enforcement and of checkpoints was significantly associated with media expenditures. The correlation of media with awareness of special enforcement was 0.97 ($p = 0.006$) and of media with awareness of checkpoints was 0.95 ($p = 0.012$). Overall, awareness was more strongly associated with media than with citations in Georgia.

Table 6: Correlations Between Activity and Awareness in the Georgia RDP

Awareness Indices	Correlation with Citations		Correlations with Media \$	
	R	p value	R	p value
Special Enforcement	0.55	ns	0.97	0.01
Seat Belt Message	0.16	ns	0.69	ns
Rural Seat Belt Message	0.17	ns	0.66	ns
Risk of Ticket	-0.27	ns	-0.05	ns
Checkpoints	0.55	ns	0.95	0.01

Note: Citation and media rates include both RDP and CIOT activity; media estimates do not include value of PSAs.

Table 7 summarizes the trends and relationships between citations, media expenditures, and awareness indices in Tennessee. None of the correlations between awareness indices and citation rate were statistically significant. Relationships between awareness and per capita media expenditures were stronger than those between awareness and citations even though most correlations were not statistically significant. Awareness of seat belt messages ($r = .93$, $p = 0.02$) and awareness of rural seat belt messages ($r = .92$, $p = 0.03$) were strongly and significantly correlated with media activity. Similar to the finding in Georgia, awareness was more strongly associated with media than with citations in Tennessee.

Table 7: Correlations Between Activity and Awareness in the Tennessee RDP

Awareness Indices	Correlation with Citations		Correlations with Media \$	
	R	p value	R	p value
Special Enforcement	0.65	ns	0.70	ns
Seat Belt Message	0.37	ns	0.93	0.02
Rural Seat Belt Message	0.24	ns	0.91	0.03
Experienced Enforcement	0.37	ns	0.62	ns
Perception of Enforcement	0.37	ns	0.25	ns
Risk of Ticket	0.00	ns	-0.75	ns

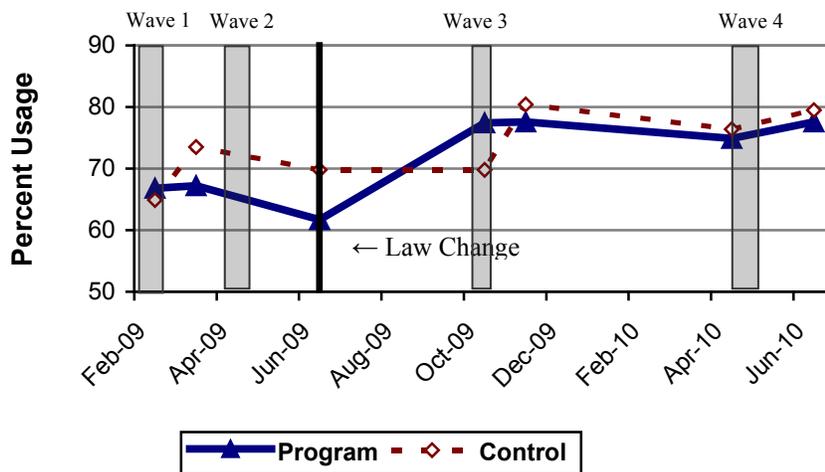
Note: Citation and media rates include both RDP and CIOT activity; media estimates do not include value of PSAs.

D. Observational Survey Results

PRG measured observed seat belt use in Florida seven times: February 2009 (baseline/pre-W1), March 2009 (post-W1), June 2009 (post-W2), October 2009 (pre-W3), November 2009 (post-W3), April 2010 (pre-W4) and June 2010 (post-W4). The October 2009 survey was the first

conducted after Florida's primary law upgrade went into effect at the end of June 2009. Figure 5 displays the results of these surveys.

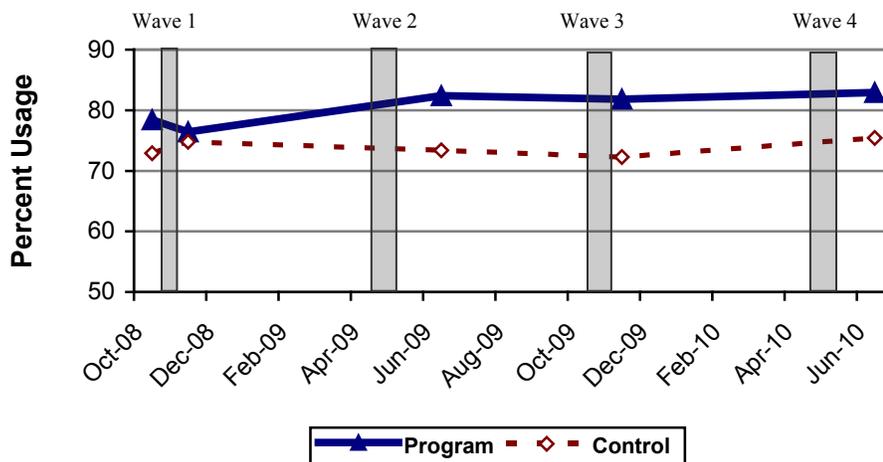
Figure 5: Observed Seat Belt Use in Rural Program and Control Areas in Florida



There was no evidence of impact of the rural program on observed belt use prior to Florida's primary law upgrade that went into effect immediately after the second wave. Both program activity and awareness data show a relatively low level of activity prior to the law change, but there was a large increase in enforcement immediately after it. The major impact in the Florida RDP area occurred after W3, which was the first wave of activity following the law change. However, it is not clear why the primary law upgrade affected the targeted area before it affected the control area. Usage in both areas increased after W4.

Georgia's Survey Research Center (SRC) measured observed seat belt use in the State six times: October 2008 (baseline/pre-W1), November 2008 (post-W1), May 2009 (post-W2/RPD only), June 2009 (post-W2), November 2009 (post-W3) and June 2010 (post-W4). SRC also conducted a seventh survey only at the RPD sites in May 2009, which is not reported here. Figure 6 displays the results of these surveys.

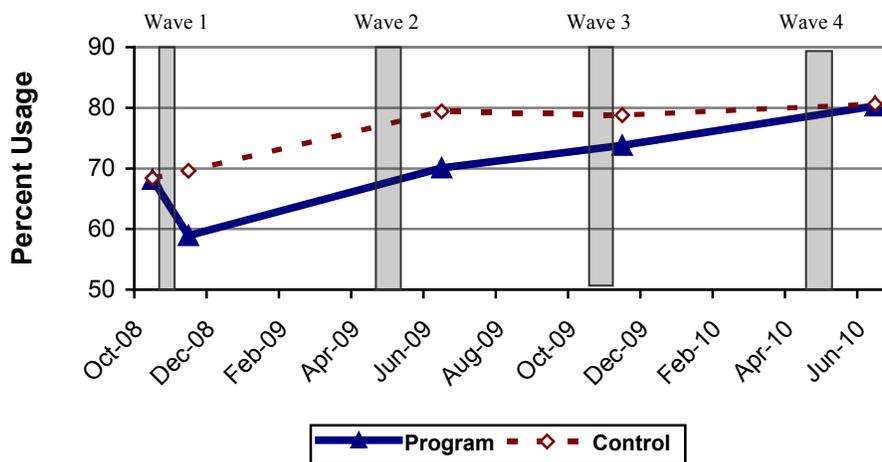
Figure 6: Observed Seat Belt Use in Rural Program and Control Areas in Georgia



In Georgia, there was a significant increase in observed seat belt usage in the targeted RDP area after the second wave (June 2009). This increase was associated with a very large increase in per capita media expenditures to more than 20 times baseline levels. The media increase occurred in the presence of a relatively high citation rate that was about three times baseline levels. Usage in the program area remained at that elevated level throughout the remainder of the program. Usage in the control area was relatively unchanged from baseline until after the third wave but increased significantly after the fourth wave (May 2010 CIOT mobilization).

Tennessee’s Transportation Research Center measured observed seat belt use in the State five times. TRC conducted the surveys in October 2008 (baselines/pre-W1), November 2008 (post-W1), June 2009 (post-W2), November 2009 (post-W3) and June 2010 (post-W4). Figure 7 displays the results of this survey.

Figure 7: Observed Seat Belt Use in Rural Program and Control Areas in Tennessee



In Tennessee, there was unexplained variation in observed belt usage surrounding the first wave. Observed belt use was about the same in the rural program and control areas before Wave 1, but observed belt use dropped significantly (9 points) in the program area after Wave 1. Seat belt usage increased in the program area at every measurement period thereafter, and the rate of increase was greater in the program area than in the control area.

Overall, seat belt usage increased significantly in the targeted rural areas of all three States: 10 percentage points in Florida, 5 in Georgia and 12 in Tennessee. Cumulative gains over baseline levels were statistically significant after Waves 3 and 4 in Florida and after Waves 2, 3 and 4 in Georgia and Tennessee. However, seat belt usage also increased in the control areas of all three States. In Florida the control area experienced a 15-percentage-point gain, which was 3 points larger than the targeted rural area, and in Tennessee the control area experienced the same 12-point gain as the targeted rural area. Only in Georgia did the control area experience a smaller increase than the targeted group with a 3-percentage-point increase, which was 2 points lower than the increase in the targeted rural area.

V. Summary and Discussion

This evaluation included a process evaluation, which measured enforcement and media activity, and an impact evaluation, which measured public awareness and seat belt use. The process evaluation found that by the third and fourth waves, all three States achieved higher citation rates during the RDP than during CIOT in spite of lower agency participation rates. The process evaluation also found that paid media for the RDP was on par or greater than CIOT efforts with campaign strengths ranging from “moderate” to “very strong.” This evaluation indicated that it is feasible to apply the CIOT model to targeted rural areas.

The strongest evidence of impact in RDP areas involved changes in awareness and perceptions related to enforcement and media activities. In Florida *awareness of rural seat belt messages*, *perceived risk of a ticket for not buckling up* and the *perception of strict enforcement of seat belt laws* increased significantly in the RDP area but not in the control area. In Georgia *awareness of rural seat belt messages* and *awareness of seat belt use checkpoints* increased significantly in the RDP area but not in the control area. Tennessee experienced significant increases in *awareness of rural seat belt messages* during Waves 2 and 3 that did not occur in the control areas, but the RDP area did not sustain the increased awareness through Wave 4.

The evidence also indicated a relationship between activities and awareness. In Florida *citations were positively associated with awareness of rural seat belt messages*. In Georgia *media expenditures were positively correlated with awareness of special enforcement activities and of seat belt checkpoints*. In Tennessee *media expenditures were positively correlated with awareness of rural seat belt messages and of general seat belt messages*. However, while many of the correlations between these variables were quite high and in fact higher than the significant correlations reported by Tison and Williams (2008), only 5 of the 34 correlations between the two activities and the 17 measures of awareness achieved statistical significance. Part of the problem is too few data points to achieve sufficient statistical power.

One way to overcome this issue is to combine the measures for the three States to obtain a larger sample (see Appendix G). Combining activity, awareness, and usage data from all three States, there were no significant correlations between citation rates and awareness indices. However, there was a significant positive correlation between *media expenditures* and *awareness of rural seat belt messages* ($r = 0.58$; $p = 0.023$). None of the relationships between activities and belt usage achieved statistical significance. Two awareness indices correlated highly with usage and achieved statistical significance: *awareness of rural seat belt messages* ($r = 0.69$; $p = 0.005$) and *perceived risk of a ticket for not buckling up* ($r = 0.55$; $p = 0.035$). In total only three of the 20 correlations between the two activities, the six measures of awareness, and usage achieved statistical significance when combining all the States.

While the significant correlations between awareness measures and belt usage suggest that the message got through to drivers, comparison of changes in belt use in the RDP versus the control areas produced mixed results. Seat belt usage increased significantly in the targeted rural areas of all three States, but it also increased at about the same rate in the control areas in two of the States. Only Georgia provided evidence of a rate of increase in rural usage greater than experienced in the control area.

Georgia may have had the strongest increases in observed belt use due to a variety of factors. Unlike the other two States, every wave of enforcement in Georgia had both a rural targeted area component and a statewide CIOT component. Georgia's media efforts were the strongest of the three. Finally, Georgia not only used seat belt checkpoints regularly, but the public was aware of the checkpoints.

Several factors may have attenuated the program effectiveness as measured in this evaluation. For one, the control areas were exposed to statewide enforcement and media, as well as national media, during the annual CIOT mobilizations. The differences in awareness between the RDP and control areas would likely have been larger in the absence of statewide and national campaigns. In addition, there are issues associated with the selected activity indices themselves. For this analysis, we chose *citation rates* and per capita *media expenditures* as the most valid indices of enforcement and media, respectively. Media expenditures are a relatively accurate measure of level of effort, but not necessarily of exposure. GRPs, if consistently reported and with an appropriate baseline, would be a better measure of exposure but were not available.

With regard to enforcement, it is not at all clear how reliably citations are reported, but it is clear that citations were very low in the first wave in both Florida and Tennessee. In addition, Florida experienced a very low level of citation activity immediately prior to its primary law upgrade. This is typical of many States that upgrade to primary enforcement and likely results from a concern about intensive enforcement prior to implementation of the new law. Immediately after the law went into effect, Florida experienced a very substantial increase in citations. Because of this jump in enforcement, it is difficult to determine which factor most influenced the large and significant usage increases observed in Florida. While it is likely that the law was the dominant factor, statewide data suggested that the RDP had an important impact in terms of sustaining gains from the law and from the previous (2009) CIOT mobilization.

It is likely that States can achieve additional gains in reaching high-risk individuals using this RDP experience and the documentation of activity and impact provided in this evaluation to further their efforts. All three States were able to provide the combination of enforcement and media needed for this type of effort, and the activities were significantly correlated with awareness, particularly awareness of the rural seat belt message. Further, while there were important differences between the States, aggregate correlations of awareness and usage suggest that greater awareness of messages to buckle up in rural areas and a greater perceived risk of receiving a ticket for not buckling are associated with increased usage in these areas. However, this evaluation only found an increase in observed belt use in an RPD area that was greater than the increase in the control area in Georgia, which may have been partially due to the use and public awareness of checkpoints.

VI. References

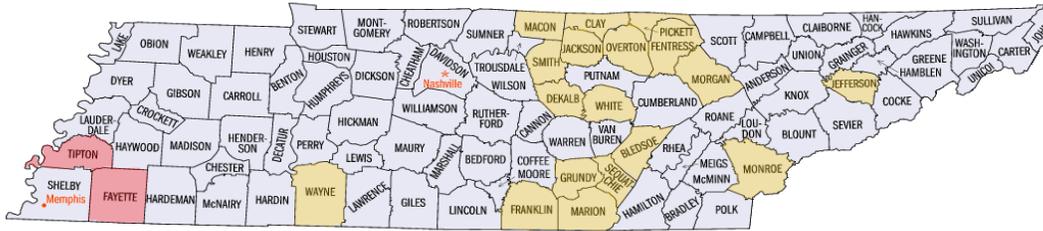
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Rural Demonstration in Tennessee
Program Counties (Orange) & Control Counties (Red)



Appendix B: Florida DMV Survey Form

Several Driver Licensing Offices in the state are participating in a study about safety belt use in Florida. Your answers to the following questions are voluntary and anonymous.

1. Your sex: Male Female
2. Your age: Under 21 21-25 26-39 40-49 50-59 60 Plus
3. Your race: White Black Asian Native American Other
4. Are you of Spanish/Hispanic origin? Yes No
5. Your Zip Code: _____
6. About how many miles did you drive last year?
 Under 5,000 5,000 to 10,000 10,001 to 15,000 Over 15,000
7. What type of vehicle do you drive most often?
 Passenger car Pickup SUV Mini-van Full-van Other
8. How often do you use seat belts when you drive or ride in a (answer for each of the following):
Car..... Always Nearly always..... Sometimes..... Seldom..... Never..... Don't drive/ride in one
Pickup..... Always Nearly always..... Sometimes..... Seldom..... Never..... Don't drive/ride in one
SUV/Van .. Always Nearly always..... Sometimes..... Seldom..... Never..... Don't drive/ride in one
9. Do you think that it is important for police to enforce the seat belt law?
 Yes No
10. What do you think the chances are of getting a ticket if you don't wear your seat belt?
 Always Nearly always Sometimes Seldom Never
11. Do you think the seat belt law in Florida is enforced:
 Very strictly Somewhat strictly Not very strictly Rarely Not at all
12. Have you ever received a ticket for not wearing your seat belt?
 Yes No
13. In the past month, have you seen or heard about police enforcement focused on seat belt use?
 Yes No
14. In the past month, have you experienced police enforcement activities looking at seat belt use?
 Yes No
15. Have you recently read, seen or heard anything about seat belts in Florida?
 Yes No
If yes, where did you see or hear about it? (check all that apply):
 Newspaper Radio TV Billboards Brochure Police Enforcement Other
If yes, what did it say? _____
16. Have you recently read, seen or heard anything about wearing a seat belt in rural areas?
 Yes No
17. If you are in a crash and your vehicle rolls over, you will be better off if (check only one):
 You are wearing a seat belt
 You are not wearing a seat belt
 You are not wearing a seat belt and you are ejected
18. Do you know the name of any seat belt program(s) Florida? (check all that apply):
 Buckle Up florida Buckle Up in Your Truck Click It or Ticket Other
19. In the past month, have you seen or heard anything about police working at night to enforce the seat belt law?
 Yes No

Appendix C: Tennessee DMV Survey Form

Several Driver Licensing Offices in the state are participating in a study about safety belt use in Tennessee. Your answers to the following questions are voluntary and anonymous.

1. Your sex: Male Female
2. Your age: Under 21 21-25 26-39 40-49 50-59 60 Plus
3. Your race: White Black Asian Native American Other
4. Are you of Spanish/Hispanic origin? Yes No
5. Your Zip Code: _____
6. About how many miles did you drive last year?
 Under 5,000 5,000 to 10,000 10,001 to 15,000 Over 15,000
7. What type of vehicle do you drive most often?
 Passenger car Pickup SUV Mini-van Full-van Other
8. How often do you use seat belts when you drive or ride in a (answer for each of the following):
Car..... Always Nearly always..... Sometimes..... Seldom..... Never..... Don't drive/ride in one
Pickup..... Always Nearly always..... Sometimes..... Seldom..... Never..... Don't drive/ride in one
SUV/Van .. Always Nearly always..... Sometimes..... Seldom..... Never..... Don't drive/ride in one
9. Do you think that it is important for police to enforce the seat belt law?
 Yes No
10. What do you think the chances are of getting a ticket if you don't wear your seat belt?
 Always Nearly always Sometimes Seldom Never
11. Do you think the seat belt law in Tennessee is enforced:
 Very strictly Somewhat strictly Not very strictly Rarely Not at all
12. Have you ever received a ticket for not wearing your seat belt?
 Yes No
13. In the past month, have you seen or heard about police enforcement focused on seat belt use?
 Yes No
14. In the past month, have you experienced police enforcement activities looking at seat belt use?
 Yes No
15. Have you recently read, seen or heard anything about seat belts in Tennessee?
 Yes No
If yes, where did you see or hear about it? (check all that apply):
 Newspaper Radio TV Billboards Brochure Police Enforcement Other
If yes, what did it say? _____
16. Have you recently read, seen or heard anything about wearing a seat belt in rural areas?
 Yes No
17. If you are in a crash and your vehicle rolls over, you will be better off if (check only one):
 You are wearing a seat belt
 You are not wearing a seat belt
 You are not wearing a seat belt and you are ejected
18. Do you know the name of any seat belt program(s) Tennessee? (check all that apply):
 Buckle Up Tennessee Buckle Up in Your Truck Click It or Ticket Other
19. In the past month, have you seen or heard anything about police working at night to enforce the seat belt law?
 Yes No

Appendix D: Georgia Telephone Survey Form

NHTSA Rural Belt Use Survey
October 2008

Hello, this is [INTERVIEWER] calling from the University of Georgia in Athens. We are working with the Governor's Office of Highway Safety in conducting a short study about safety belt usage tonight and we'd like to interview a member of your household. In order for the results of the survey to be representative of all Georgians, I need to speak with the person in your household who had the last birthday and is at least 16 years old. Would that be you?

1. Yes [CONTINUE]
2. No [MAY I SPEAK WITH THAT PERSON PLEASE. IF NO, GET SR'S NAME AND SET CALLBACK]

Great. Thanks.

Q1 – First, I need to ask you your age.

_____ years old

- 95 – 95 or older
- 97 – Refused
- 98 - Don't Know
- 99 – Not Ascertained

[RANGE: 16 – 99]

[INTERVIEWER: IF RESPONDENT IS LESS THAN 18 YEARS OLD, PRESS '1', OTHERWISE PRESS '2'. IF REFUSED, DON'T KNOW OR NOT ASCERTAINED, ASK IF HE/SHE IS 18 YEARS OR OLDER. IF STILL NOT ASCERTAINED, TERMINATE AND CODE AS FIRST REFUSAL]

1. Respondent is less than 18 [CONTINUE]
2. Respondent is at least 18 [SKIP TO INTRO]

Q2 – Since you are less than 18 years old, I need to ask a parent or guardian for consent for you to complete the interview. Make I speak to a parent or guardian?

1. Yes [CONTINUE WITH INFORMED CONSENT STATEMENT]
2. No [SET CALLBACK TO REACH PARENT FOR INFORMED CONSENT]

[Informed Consent Statement: "We would like for your son/daughter to participate in a telephone survey tonight about knowledge of and use of safety belts. All of the questions are completely voluntary and we anticipate no distress to your son/daughter for participating in this study. The data from this study will be used to improve highway safety initiatives, including increasing safety belt usage, and all information your son/daughter provides will be kept strictly confidential].

Q3- May I have your permission to interview your son/daughter for this study?

1. Yes [CONTINUE]
2. No [TERMINATE WITH "Refused Informed Consent"]

Okay. Before we get started, all information that you provide will be kept strictly confidential. All questions are voluntary and you can skip any question you don't want to answer. Also, my Supervisor may listen to part of the interview for quality control purposes.

Q4 – To begin, how often do you drive a motor vehicle? Would you say every day, a few days a week, a few days a month, a few days a year, or never?

1. Every Day
 2. Few Days a Week
 3. Few Days a Month
 4. Few Days a Year
 5. Never [SKIP TO Q12]
- 9 – R/DK/NA [SKIP TO Q12]

Q5 – Is the vehicle you drive most often a car, a van, a motorcycle, a Sports Utility Vehicle, a pick up truck, or something else?

1. Car
 2. Van
 3. Motorcycle [SKIP TO Q12]
 4. SUV
 5. Pick Up
 6. Other [SPECIFY _____]
- 9 – R/DK/NA

Q6 – For the next few questions, please answer only for the vehicle you said you usually drive. Do the seat belts in the front seat of the vehicle go across your shoulder only, across your lap only, or across both your shoulder and lap?

1. Across shoulder 9 – R/DK/NA
2. Across lap [SKIP TO Q8]
3. Across both
4. Vehicle has no belts [SKIP TO Q9]

Q7 – When driving this vehicle, how often do you wear your shoulder belt? Would you say all of the time, most of the time, some of the time, rarely, or never?

1. All of the time 9 – R/DK/NA
2. Most of the time
3. Some of the time
4. Rarely
5. Never

[IF Q6 = 1, SKIP TO Q9]

Q8 – When driving this vehicle, how often do you wear your lap belt? Would you say all of the time, most of the time, some of the time, rarely, or never?

1. All of the time 9 – R/DK/NA
2. Most of the time
3. Some of the time
4. Rarely
5. Never

Q9 – When was the last time you did NOT wear your seat belt when driving? Would you say within the past day, within the past week, within the past month, within the past year, or not at all?

1. Past Day 9 – R/DK/NA
2. Past Week
3. Past Month
4. Past Year
5. Not at All

Q10 – In the past 30 days, has your use of seat belts when driving increased, decreased, or stayed the same?

1. Increased 9 – R/DK/NA [SKIP TO Q12]
2. Decreased [SKIP TO Q12]
3. Stayed the Same [SKIP TO Q12]

Q11 – What caused the use of your seat belts to increase?

[INTERVIEWER NOTE: CHOOSE ALL THAT APPLY]

[YES/NO TOGGLE]

1. Increased awareness of safety
2. Seat Belt Law
3. Fear of Ticket
4. Was in Crash
5. New Car with Automatic Belt
6. Influence/Pressure from Others
7. Other [SPECIFY _____]
8. Ref/DK/NA
9. Exit

Q12 – Does Georgia have a law requiring seat belt use by adults?

1. Yes 9 – R/DKNA [SKIP TO Q15]
2. No [SKIP TO Q15]

[IF Q5 = 3, SKIP TO Q18, OTHERWISE CONTINUE;
IF Q4 = 5, SKIP TO Q14, OTHERWISE CONTINUE]

Q13 – Assume that you don't use your seat belt at all while driving over the next six months. How likely do you think you will be to receive a ticket for not wearing a seat belt? Would it be very likely, somewhat likely, somewhat unlikely, or very unlikely?

- 1. Very Likely 9 – R/DK/NA
- 2. Somewhat Likely
- 3. Somewhat Unlikely
- 4. Very Unlikely

Q14 – According to state law, can police stop a vehicle if they observe a seat belt violation or do they have to observe some other offense first in order to stop the vehicle?

- 1. Can stop just for seat belt violation 9 – R/DK/NA
- 2. Must observe other offense first

Q15 – In your opinion, should police be allowed to stop a vehicle if they observe a seat belt violation when no other traffic laws are being broken?

- 1. Yes, should be allowed to stop 9 – R/DK/NA
- 2. No, should not be allowed to stop

Q16 – Have you ever received a ticket for not wearing seat belts?

- 1. Yes 9 – R/DK/NA [SKIP TO Q18]
- 2. No [SKIP TO Q18]

Q17 – How long ago did you receive a ticket for not wearing seat belts?

INTERVIEWER: RECORD IN WEEKS]

[INTERVIEWER: PROMPT WITH “Just give me your best guess”?]

_____ weeks ago 95 – 95 weeks or more
99 – R/DK/NA

Q18 – In the past 30 days, have you seen or heard of any special effort by police to ticket drivers in your community for seat belt violations?

- 1. Yes 9 – R/DK/NA [SKIP TO Q22]
- 2. No [SKIP TO Q22]

Q19 – In the past 30 days, have you seen or heard of any special effort by police to ticket drivers for safety belt non-use at night?

- 1. Yes 9 – R/DK/NA [SKIP TO Q22]
- 2. No [SKIP TO Q22]

Q20 – Where did you see or hear any such messages?

- 1. Television 9 – R/DK/NA [SKIP TO Q22]
- 2. Radio
- 3. Friend/Relative [SKIP TO Q21]
- 4. Other [SPECIFY _____] [SKIP TO Q22]

Q21 – Was the message a commercial or advertisement, was it part of a news program, or was it something else?

- 1. Commercial/Ad/Public Service Announcement 9 – R/DK/NA
- 2. New Story/Program
- 3. Something Else [SPECIFY _____]

Q22 – In the past 30 days have you seen or heard any messages that encourage people in rural areas to wear their seat belts? This could be public service announcements on TV, messages on the radio, signs on the road, or anything like that.

- 1. Yes 9 – R/DK/NA
- 2. No

Q23 – In the past 30 days have you seen or heard anything about the police setting up seat belt checkpoints where they will stop motor vehicles to check whether drivers and passengers are wearing seat belts?

- 1. Yes 9 – R/DK/NA [SKIP TO Q25]
- 2. No [SKIP TO Q25]

Q24 - By checkpoint, we mean a systematic effort by police to stop vehicles for the purpose of checking for compliance with existing seat belt laws. Let me just confirm, is this the type of checkpoint that you have seen or heard about in the past 30 days?

1. Yes
 2. No
- 9 – R/DKNA

Q25 – Where did you see or hear about checkpoints for seat belts?

Q25A - Did you hear about checkpoints for seat belts on television?

1. Yes
 2. No
9. REF/DK/NA

Q25B - Did you hear about checkpoints for seat belts on the radio?

1. Yes
 2. No
9. REF/DK/NA

Q25C - Did you hear about checkpoints for seat belts from a friend or relative?

1. Yes
 2. No
9. REF/DK/NA

Q25D - Did you hear about checkpoints from somewhere else that we haven't mentioned?

1. Yes [Specify _____]
 2. No
9. REF/DK/NA

IF (Q25A = 9) SKP Q31
IF (Q25B = 9) SKP Q31
IF (Q25C = 1) SKP Q31
IF (Q25C = 9) SKP Q31
IF (ANS = 1) SKP Q31
IF (ANS = 9) SKP Q31

Q26 – Was the message a commercial, was it part of a news program, or was it something else?

1. Commercial/Advertisement/Public Service Announcement
 2. News Story/News Program
 3. Something Else [SPECIFY _____]
- 9 – R/DK/NA

Q27 – In the past 30 days, did you personally see any checkpoints where police were stopping motor vehicles to see if drivers and passengers were wearing their seat belts?

1. Yes
 2. No [SKIP TO Q29]
- 9 – R/DK/NA [SKIP TO Q29]

Q28 – Again, by checkpoint, we mean a systematic effort by police to stop vehicles for the purpose of checking for compliance with existing seat belt laws. Let me just confirm, is this the type of checkpoint that you personally saw in the past 30 days?

1. Yes
 2. No
- 9 – R/DK/NA

Q29 – Were you personally stopped by police at a seat belt checkpoint in the past 30 days?

1. Yes
 2. No
- 9 – R/DK/NA

Q30 – In the past 30 days, have you seen or heard of any special effort by police to ticket drivers in your community if children in their vehicles are not wearing seat belts or are not in car seats?

1. Yes
 2. No
- 9 – R/DK/NA

Q31 – In the past 30 days, have you seen or heard any messages that encourage people to wear their seat belts? This could be public service announcements on TV, messages on the radio, signs on the road, news stories, or anything like that.

- 1. Yes 9 – R/DK/NA [SKIP TO Q33]
- 2. No [SKIP TO Q33]

Q32 – Would you say the number of messages you have seen or heard in the past 30 days is more than usual, fewer than usual, or about the same as usual?

- 1. More than Usual 9 – R/DK
- 2. About the Same
- 3. Fewer than Usual

Q33 – Are there any other types of activities that you have seen or heard in the past 30 days that encouraged people to wear seat belts?

- 1. Yes 9 – R/DK/NA [SKIP TO Q35]
- 2. No [SKIP TO Q35]

Q34 – What are those?

- 1. Enter response _____
- 9. Ref/DK/NA

Q35 – Thinking about everything you have heard, how important do you think it is for Georgia to enforce seat belt laws for adults more strictly? Would you say it is very important, fairly important, just somewhat important, or not that important?

- 1. Very Important 9 – R/DK/NA
- 2. Fairly Important
- 3. Just Somewhat Important
- 4. Not That Important

I have just a few more questions for demographic purposes, and I appreciate your patience.

Q36 – Including yourself, how many persons age 16 or older are living in your household at least half of the time or consider it their primary residence?

_____ people 16 or older 8 – 8 OR MORE
9 – R/DK/NA

Q37 – How many children age 15 or younger are living in your household at least half of the time or consider it their primary residence?

_____ people 15 or under 8 – 8 OR MORE
9 – R/DK/NA

Q38 – Do you consider yourself to be Hispanic or Latino?

- 1. Yes 9 – R/DK/NA
- 2. No

Q39 – Which of the following do you consider yourself to be? Are you white, African-American, Asian, multi-racial, or something else?

- 1. White 9 – R/DK/NA
- 2. African-American
- 3. Asian
- 4. Multi-racial [SPECIFY _____]
- 5. Other [SPECIFY _____]

Q40 – What is the highest grade or year of school you have completed?

- 1. < 9th Grade 9 – R/DK/NA
- 2. 9th Grade
- 3. 10th Grade
- 4. 11th Grade
- 5. 12th Grade/GED
- 6. Some College
- 7. College Graduate or Higher

That's all the questions I have for you today. Thank you for your time.

IMPORT FIPS

IMPORT MSA/NON-MSA

CREATE VARIABLES: PRE-TEST AND POST-TEST

Appendix E: Sample Rural Observation Form (Florida)

SITE NUMBER: _____ SITE: _____

NOTES: _____

DATE: _____ - _____ - _____ DAY OF WEEK: _____

1 Clear / Sunny
2 Light Rain
3 Cloudy

4 Fog
5 Wet But Not Raining

DIRECTION OF TRAFFIC FLOW (Circle one): N S E W

START TIME: _____ (Observation period will last exactly 60 minutes)

Veh. #	VEHICLE			DRIVER		PASSENGER		
	Vehicle C = car T = truck S = suv V = van	Race W = White B = Black H = Hispanic O = Other U = unsure	Sex M = male F = female U = unsure	Use Y = yes N = no U = unsure	Race W = White B = Black H = Hispanic O = Other U = unsure	Sex M = male F = female U = unsure	Use Y = yes N = no U = unsure	
1								
2								
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Appendix F: Awareness Trends, Program and Control by State

Awareness and Perceptions Regarding Enforcement and Media in Florida

In the past 30 days, have you seen or heard about police enforcement focused on seat belt use?

Wave	RDP Area				Control Area			
	%	n	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	44.0	814	-	-	46.1	238	-	-
W1	54.6	632	10.6*	10.6*	46.4	182	0.3	0.3
W2	54.9	514	0.3	10.9*	63.2	398	16.8*	17.1*
W3	73.4	632	18.5*	29.4*	60.3	351	-2.9	14.2*
W4	73.6	439	-0.2	29.6*	68.7	243	8.4*	22.6*

In the past 30 days, have you seen or heard anything about seat belts?

Wave	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
			B	62.9			811	-
W1	72.9	628	10.0*	10.0*	68.9	183	2.8	2.8
W2	83.1	516	10.2*	20.2*	82.3	396	13.4*	16.2*
W3	84.8	626	1.7	21.9*	75.9	352	-6.4*	9.8*
W4	82.5	441	-2.3	19.6*	80.8	239	4.9	14.7*

Have you recently read, seen, or heard anything about wearing a seat belt in rural areas?

Wave	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
			B	29.8			809	-
W1	33.3	624	3.5	3.5	30.0	180	-2.2	-2.2
W2	33.3	630	0.0	3.5	36.2	396	6.2	4.0
W3	37.8	532	4.5	8.0*	32.8	378	-3.4	0.6
W4	45.5	433	7.7*	15.7*	36.0	236	3.2	3.8

***How strictly do you think police enforce the seat belt law?
("very strictly + somewhat strictly" percentages are shown)***

Wave	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
			B	71.2			811	-
W1	74.3	623	3.1	3.1	80.3	183	6.3	6.3
W2	83.2	507	8.9*	12.0*	73.1	394	-7.2 ^v	-0.9
W3	83.9	627	0.7	12.7*	75.6	348	2.5	1.6
W4	81.9	535	-2.0	10.7*	80.0	378	4.4	6.0

***What do you think your chances are of getting a ticket if you don't wear your seat belt?
("very likely + somewhat likely" percentages are shown)***

Wave	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
			B	54.4			806	-
W1	61.2	627	6.8*	6.8*	63.1	184	8.9 ^v	8.9 ^v
W2	65.5	510	4.3	11.1*	55.3	396	-7.8 ^v	1.1
W3	64.5	439	5.5*	16.6*	58.8	354	3.5	4.6
W4	64.5	439	-6.5*	10.1*	55.2	383	-3.6	1.0

* indicates significant change (+ or -) at 0.05 level with increases shaded; ^v indicates p > 0.05 but less than 0.10;

Awareness/Perceptions Regarding Enforcement and Media in Georgia

<i>Saw/Heard about special efforts by police to ticket drivers for seat belt violations.</i>								
Wave	RDP Area				Control Area			
	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	22.3	808			22.9	279		
W1	33.7	808	11.4	11.4	26.6	301	3.7	3.7
W2	39.0	881	5.3	16.7	24.3	301	-2.3	1.4
W3	35.6	885	-3.4	13.3	28.3	297	4.0	5.4
W4	34.2	894	-1.4	11.9	33.0	294	4.7	10.1
<i>Recently Saw/Heard heard messages encouraging people to wear their seat belts.</i>								
Wave	RDP Area				Control Area			
	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	61.5	805	-	-	65.0	280	-	-
W1	66.8	864	5.3*	5.3*	67.6	306	2.6	2.6
W2	77.2	896	10.4*	15.7*	76.6	304	9.0*	11.6*
W3	65.0	895	-12.2*	3.5	64.5	301	-12.1*	-0.5
W4	75.6	903	10.6*	14.1*	77.5	298	13.0*	12.5*
<i>Recently Saw/Heard messages encouraging people in rural areas to wear their seat belts.</i>								
Wave	RDP Area				Control Area			
	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	47.1	809			58.3	278	-	-
W1	52.0	860	4.9*	4.9*	54.1	305	-4.2	-4.2
W2	57.1	887	5.1*	10.0*	59.6	300	5.5	1.3
W3	51.7	887	-5.4*	4.6 ^v	51.0	300	-8.6*	-7.3*
W4	63.2	901	11.5*	16.1*	60.3	295	9.3*	2.0
<i>Police should be allowed to stop a vehicle for a seat belt violation.</i>								
Wave	RDP Area				Control Area			
	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	85.0	676	-	-	79.0	272	-	-
W1	86.8	733	1.8	1.8	83.1	290	4.1	4.1
W2	81.6	691	-5.2*	-3.4*	81.8	292	-1.3	2.8
W3	82.9	718	1.3	-2.1	84.3	286	2.5	5.3
W4	84.7	738	1.8	-0.3	84.2	284	-0.1	5.2
<i>Likelihood of receiving a ticket for riding unbuckled (for six months).</i>								
Wave	RDP Area				Control Area			
	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	72.9	801	-	-	74.0	277	-	-
W1	72.0	849	-0.9	-0.9	74.6	299	0.6	0.6
W2	72.3	773	0.3	-0.6	66.1	251	-8.5*	-7.9*
W3	71.5	755	-0.8	-1.4	73.6	247	7.5 ^v	-0.4
W4	75.5	755	4.0 ^v	2.6	78.9	247	5.3	4.9

* asterisk plus shaded cell denotes significant increase at $p \leq 0.05$;
 * asterisk alone indicates a significant decrease at $p \leq 0.05$;
 v check mark and lightly shaded cell indicates increase with $p > 0.05$ but < 0.10

Awareness and Perceptions Regarding Enforcement and Media in Tennessee

<i>In the past 30 days, have you seen or heard about police enforcement focused on seat belt use?</i>								
Wave	RDP Area				Control Area			
	%	n	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	62.8	226	-	-	58.4	380	-	-
W1	62.5	240	-0.3	-0.3	49.6	262	-8.8*	-8.8*
W2	77.7	188	+15.2*	+14.9*	65.8	260	+16.2*	+7.4 ^v
W3	69.9	176	-7.8 ^v	+7.1	52.8	229	-13.0*	-5.4
W4	65.9	164	-4.0	+3.1	54.5	66	+1.7	-3.9
<i>In the past 30 days, have you seen or heard anything about seat belts?</i>								
Wave	RDP Area				Control Area			
	%	N	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	76.5	226	-	-	72.6	380	-	-
W1	80.1	236	3.6	3.6	65.6	262	-7.0 ^v	-7.0 ^v
W2	85.1	188	5.0	8.6*	78.5	260	12.9*	5.9
W3	83.1	177	-2.0	6.6	67.7	229	-10.8*	-4.9
W4	80.5	164	-2.6	4.0	74.2	66	6.5	1.6
<i>Have you recently read, seen, or heard anything about wearing a seat belt in rural areas?</i>								
Wave	RDP Area				Control Area			
	%	n	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	34.7	222	-	-	30.8	373	-	-
W1	41.4	237	6.7	6.7	32.8	259	2.0	2.0
W2	48.6	185	7.2	13.9*	27.5	255	-5.3	-3.3
W3	47.8	178	-0.8	13.1*	22.8	224	-4.7	-8.0*
W4	40.7	162	-7.1	6.0	24.6	65	1.8	-6.2
<i>How strictly do you think police enforce the seat belt law? (somewhat + very likely)</i>								
Wave	RDP Area				Control Area			
	%	n	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	82.5	217	-	-	79.0	375	-	-
W1	78.1	238	-4.4	-4.4	74.9	259	-4.1	-4.1
W2	87.7	187	9.6*	5.2	75.5	261	0.6	-3.5
W3	81.7	175	-6.0	-0.8	80.2	227	4.7	1.2
W4	75.5	163	-6.2	-7.0	73.9	65	-6.3	-5.1
<i>How likely is it that you would get a ticket if you don't wear your seat belt?(somewhat + very)</i>								
Wave	RDP Area				Control Area			
	%	n	Change		%	n	Change	
			Incr.	Cum.			Incr.	Cum.
B	65.5	226	-	-	59.5	380	-	-
W1	57.3	239	-8.2 ^v	-8.2 ^v	56.1	262	-3.4	-3.4
W2	57.9	188	0.6	-7.6	51.1	260	-5.0	-8.4*
W3	53.1	177	-4.8	-12.4*	43.2	231	-7.9 ^v	-16.3*
W4	55.7	165	2.6	-9.8	48.5	66	5.3	-11.0 ^v

* asterisk (plus darker shaded cell) denotes significant increase at p ≤ 0.05;
 * asterisk without shading indicates a significant decrease at p ≤ 0.05;
^v check mark (plus lightly shaded cell) indicates increase with p value > 0.05 but < 0.10

Appendix G: Associations Between Activity, Awareness, and Usage

State	Correlations			Index	Strongest Waves*		
	with Citations	with Media	with Usage		Program	Control	
Florida	0.59	-0.22	n/a	Usage Rate	3, 4	3, 4	
	n/a	0.52	0.59	Citation Rate	2, 3, 4	2, 4	
	0.52	n/a	-0.22	Media Rate	2, 4	2, 4	
	0.61	-0.32	0.81	Spl. Enforce	3, 4	2, 4	
	0.12	-0.74	0.79	Pers. Exper.	3, 4	4	
	r(3)	0.16	-0.56	0.43	Ticket Likely	2, 3, 4	1
	0.37	-0.30	0.35	SB Msg	2, 3, 4	2, 4	
	0.89	-0.07	0.76	Rural Msg	3, 4	2, 4	
0.37	-0.20	0.34	Strict Enforce.	2, 3, 4	1, 4		
Georgia	-0.37	0.42	n/a	Usage Rate	2, 4	4	
	n/a	0.68	-0.37	Citation Rate	1, 2, 3, 4	1, 2, 3, 4	
	0.68	n/a	0.42	Media Rate	1, 2, 3, 4	1, 2, 3, 4	
	0.55	0.98	0.52	Spl. Enforce	1, 2, 3, 4	3, 4	
	r(3)	-0.27	-0.05	0.39	Ticket Likely	4	1, 3, 4
	0.55	0.95	0.56	Checkpoints	1, 2, 3, 4	1	
	0.16	0.69	0.66	SB Msg	2, 4	2, 4	
	0.17	0.65	0.69	Rural Msg	2, 4	B, 2, 4	
Tennessee	0.76	-0.03	n/a	Usage Rate	4	3, 4	
	n/a	0.13	0.76	Citation Rate	2, 3, 4	2, 4	
	0.13	n/a	-0.03	Media Rate	1, 2, 3, 4	2, 4	
	0.66	0.7	0.29	Spl. Enforce	2, 3	B, 2	
	0.37	0.62	0.07	Pers. Exper.	2, 3	B	
	r(3)	-0.01	-0.75	-0.33	Ticket Likely	B	B
	0.39	0.98	0.21	SB Msg	2, 3, 4	2, 4	
	0.26	0.91	0.16	Rural Msg	2, 3	1	
0.37	0.25	-0.16	Strict Enforce.	2	3		
All 3 States	0.38	0.11	n/a	Usage Rate	n/a	n/a	
	n/a	0.09	0.38	Citation Rate	n/a	n/a	
	0.09	n/a	0.11	Media Rate	n/a	n/a	
	0.24	0.14	-0.35	Spl. Enforce	n/a	n/a	
	0.14	0.35	0.23	Pers. Exper.	n/a	n/a	
	r(13)	0.11	-0.24	0.55*	Ticket Likely	n/a	n/a
	0.20	0.27	-0.20	SB Msg	n/a	n/a	
	0.29	0.58*	0.69*	Rural Msg	n/a	n/a	
0.29	0.23	0.31	Strict Enforce.	n/a	n/a		
Notes	asterisk (*) plus bold font indicates significant correlation (p < 0.05)						
	bold font for wave numbers indicates stronger effect than regular type						
	* Designation of most effective waves is qualitative in that it integrates several factors (change, level, etc.)						

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