

Evaluation of the *Buckle Up in Your Truck* Programs

BUCKLE UP OR PAY UP.



This program is sponsored in part by the
National Highway Traffic Safety Administration's seat belt campaign.



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16. Abstract <p>In 2006 and 2007, all four States in NHTSA's Region 7 (Iowa, Kansas, Missouri, and Nebraska) participated in a two-year Buckle Up in Your Truck (BUIYT) program. Each year, this program consisted of a two-week, high-visibility, seat belt enforcement effort that preceded the National May Click It or Ticket (CIOT) mobilization. Paid media and intensified enforcement were the two key components of the BUIYT programs. The paid media focused on young male occupants of pickup trucks while enforcement focused on all unbuckled vehicle occupants. Both components were followed by a second paid media and enforcement campaign (CIOT). An average of 5¢ per capita was spent on paid media during each phase of the program (BUIYT and CIOT), achieving about 350 gross rating points in each of 18 media markets for each week of the program. The citation rate, averaged across the States, was 15 to 17 citations per 10,000 populations. Awareness of general messages to buckle up and of ongoing enforcement reached high levels of about 80% and 68%, respectively. Awareness of messages to buckle up in pickup trucks reached levels of just under 40%. Observed seat belt usage increased in all four States and in all vehicle types. Two-year increases in pickup trucks ranged from 3 to 14 percentage points (an average of 8 points). These results were similar to those of previous BUIYT efforts, combined with CIOT, in NHTSA Regions 4 and 6.</p>					
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Background

In May 2006 and 2007, NHTSA's Region 7, which includes Iowa, Kansas, Missouri, and Nebraska, implemented a high-visibility seat belt enforcement program called *Buckle Up in Your Truck (BUIYT)*. This program sought to increase seat belt use among pickup truck occupants by making such occupants aware of the dangers of riding unbuckled and awareness of ongoing enforcement efforts. Following this BUIYT phase, all four States conducted statewide CIOT campaigns that included additional paid media and enforcement directed at occupants of all vehicle types.

Media

The BUIYT and CIOT media campaigns targeted 18 media markets region wide. In 2006, about \$1.1 million was spent on paid advertising for the two campaigns combined. This expenditure increased to \$1.2 million in 2007. Thus, in each year, about 4¢ to 5¢ per capita was spent for each phase of these BUIYT/CIOT campaigns, totaling 9¢ to 10¢ per capita for the two efforts combined. By comparison, States in NHTSA's Region 4 and Region 6 spent about 11¢ per capita on media in previous BUIYT/CIOT programs. Data from media plans and several post-buy analyses suggested that these campaigns achieved at least 350 gross rating points (GRPs) per week, per market, indicative of "strong" media efforts.

Special Seat Belt Enforcement

All four States used regular grants and overtime funding to establish their core group of participating enforcement agencies. In addition, they recruited participation via combinations of special grants, equipment incentives, awards, luncheons, and mailings. *Law enforcement liaisons (LELs)* played a major role in the recruitment process in two States, Iowa and Kansas.

Each year, States intensified enforcement during both phases of the overall campaign. In 2006, they targeted one week during BUIYT and two weeks during CIOT. In 2007, they targeted two weeks during each phase. On average, police issued 3 to 4 citations per 10,000 residents during BUIYT and 11 citations per 10,000 residents during CIOT. Although the CIOT rates were higher than the BUIYT rates, they were lower than those reported for several past benchmark efforts. These benchmark efforts averaged 20 to 24 citations per 10,000 residents over two weeks of enforcement. Iowa and Kansas generally had higher citation rates than Missouri and Nebraska.

Awareness of Program and Special Seat Belt Enforcement

Public awareness of the BUIYT/CIOT campaigns increased significantly in every State during both years. Although post-campaign awareness levels were similar in 2006 and 2007, there were important differences following each of the two phases. More people were aware of general seat belt messages, the CIOT slogan, and special enforcement efforts following the CIOT phase than following the BUIYT phase. Awareness of specific messages to buckle up while riding in pickup trucks peaked immediately after the BUIYT phase and, in some cases, declined during the CIOT phase.

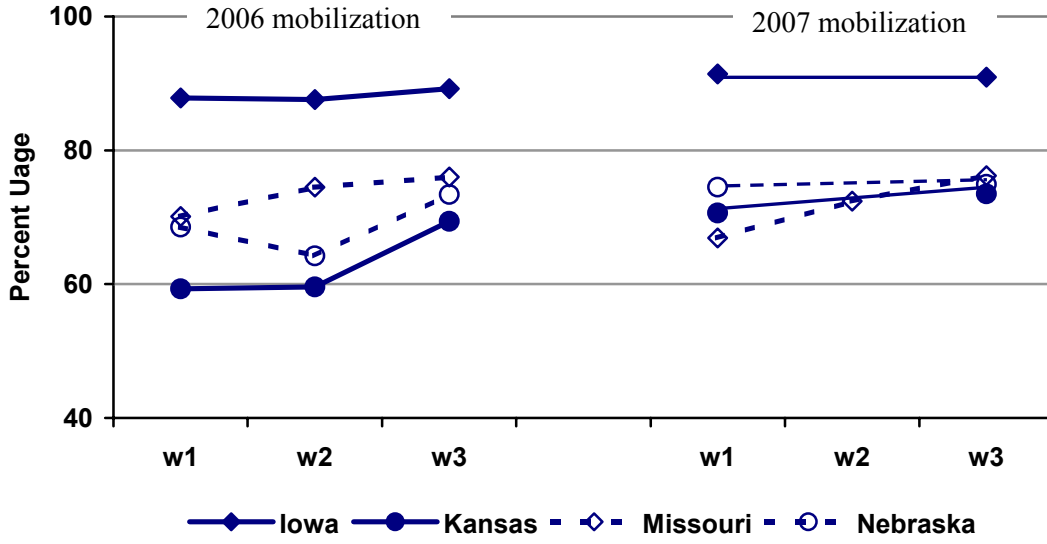
Changes in Observed Seat Belt Use

Over the two-year program, seat belt use increased significantly among occupants of all vehicle types. The greatest increases occurred in 2006, when there was an average 7-percentage-point increase among occupants of pickup trucks and a 6-point increase among occupants of other vehicles. Over the two-year program, both groups increased seat belt use on average, 8 points. Two-year increases among occupants of pickup trucks ranged from 3 points in Nebraska to 14 points in Kansas. Increases among occupants in other vehicles ranged from 2 points in Iowa to 14 points in Kansas.

A binary logistic regression analysis of data from the Fatality Analysis Reporting System (FARS) found that a modest, two-year increase in seat belt use among crash victims was not statistically significant. However, there was a significant interaction effect in that the belted proportion of occupants of pickup trucks increased more than the belted proportion of occupants of other vehicles (Wald (1) = 13.32; $p < 0.01$).

In summary, based on overall results and on phase-specific results available in 2006, the BUIYT phase did increase awareness of messages to buckle up in pickup trucks and it may have had an impact on usage among such occupants who were involved in serious and fatal crashes. In terms of observed seat belt use, however, the CIOT phase had the greatest impact among all occupants, whether in pickup trucks or in other vehicles. This is consistent with the fact that the greatest increases in awareness of general messages to buckle up and in awareness of special efforts to enforce seat belt laws were associated with the CIOT phase. These results suggest that targeted programs such as BUIYT should be paired with CIOT mobilizations to maximize their impact. Even greater effectiveness may be possible by including the more specific BUIYT message in the CIOT phase as well as in the BUIYT phase. However, this suggestion would have to be weighed against potential problems associated with providing multiple messages.

Changes in All-Vehicle Seat Belt Usage by State in 2006 and 2007



Average Usage Rates and Changes in the Four States, by Vehicle Type

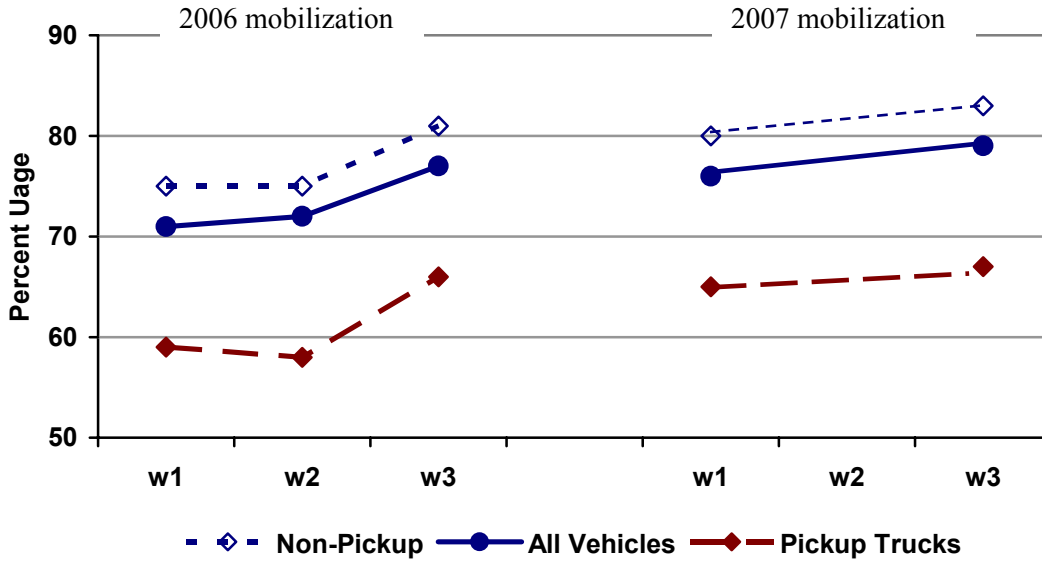


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I. Background

Seat belt use in pickup trucks is lower than in any other type of passenger vehicle on the road. In 2006, during daytime hours, 40% of pickup truck fatalities were restrained compared with 60% of fatalities in passenger cars. This situation worsens at night when 24% of pickup truck fatalities were restrained compared with 42% of passenger car occupants (NHTSA, 2008a). In 2008, seat belt use in pickup trucks was 74%, well below the 83% national seat belt use rate (NHTSA, 2008b). Seat belt use in pickup trucks is significantly lower in rural areas and secondary States. In addition, pickup trucks experienced twice as many fatal crashes in rural areas compared with urban areas, and they were twice as likely as passenger cars to roll over in crashes. Focus groups with male pickup truck drivers have identified several barriers that exist, including a false perception of increased safety in such vehicles (Nitzburg & Knoblauch, 2004).

To address the challenge of low seat belt use among pickup truck occupants, particularly young males, the National Highway Traffic Safety Administration initiated a series of high-visibility enforcement demonstration programs called *Buckle Up in Your Truck* (BUIYT). The first such program implemented in 2004 was in NHTSA's Region 6, which included Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. In 2005, a BUIYT demonstration was implemented in NHTSA's Region 4. It included Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Key components of these programs were: (1) paid media; (2) earned media; (3) enforcement; (4) outreach; (5) evaluation; and (6) coordination. Each of these programs preceded an annual CIOT mobilization that also involved enforcement and publicity targeting occupants of all vehicle types. Thus, in each implementation, the BUIYT effort was one part of a two-phased BUIYT/CIOT mobilization.

During the Region 4 program, implemented from 2004 through 2006, seat belt use among pickup truck occupants increased by 7.5 percentage points, from just under 62% to just over 69%. This increase was nearly 3 points greater than the increase observed among passenger car occupants in these eight States (Tison et al., 2008).¹ In Region 6, seat belt use in pickup trucks increased minimally (by 2 points) during an initial, media-only BUIYT phase. However, following a five-week CIOT phase that included paid media and enforcement, seat belt use in pickup trucks increased by 8 points, compared with a 6-point increase in passenger cars (Solomon & Chaffe, 2005). After three years of BUIYT/CIOT activity in this Region, seat belt use in pickup trucks increased by 16 points, from 60% to 76%, achieving similar use rates as occupants of all vehicles (Tison et al., 2008). A more detailed description of these projects and their results is in Appendix A.

After the gains observed in Regions 4 and 6, NHTSA selected Region 7, which includes Iowa, Kansas, Missouri, and Nebraska, to participate in a BUIYT demonstration project. This Region also experienced low usage rates among occupants of pickup trucks. In

¹ While the results of these campaigns have been summarized in previous reports, along with preliminary results from the program reported on in this study, the results of these initial BUIYT efforts are included in Appendix A of this report to have all of the BUIYT results in a single reference document.

2004, for example, there were 361 occupants of pickup trucks killed in these four States and 74% were not wearing seat belts at the time of their crashes. About 29% of these pickup truck fatalities were involved in a rollover crash.

NHTSA proposed the Region 7 BUIYT program in December 2005. It was planned as a two-year effort, with two targeted periods of activity in May 2006 and 2007, each preceding a CIOT mobilization. There was an additional media-only phase in November 2006, but no evaluation was conducted of this *partial* implementation. All four States agreed to participate in this project, which was also referred to as the *Pickup Truck (PUT)* Project in this Region. PUT was an alternative name used by States for BUIYT.

NHTSA provided technical assistance for project coordination, outreach, media/communications and evaluation. The four States agreed to develop two-year program plans and fund enforcement, paid and earned media, outreach, and evaluation.

II. Program Development and Implementation

A. Program Planning and Coordination

A coordinating committee was established for the Region 7 BUIYT project. It included a point-of-contact for each of the State Highway Safety Offices (SHSO); representatives from NHTSA headquarters (Office of Occupant Protection, Office of Communications and Consumer Information, and the Behavioral Technology Research Division); and NHTSA's Region 7 office. The coordinating committee also included the Tombras Group for media support; the Preusser Research Group (PRG) for evaluation; and the Mercer Consulting Group, LLC (MCG), for overall management and coordination.

The value of program coordination and management cannot be underestimated, particularly when multiple States, contractors, and government offices are involved. MCG served as a key point-of-contact between the many participants, particularly with regard to communications efforts. At the direction of MCG, each State prepared a work plan that included each of the component areas and provided regular activity reports. In addition, MCG facilitated communication between NHTSA, the States, contractors, and the media by developing a campaign Web site that included program descriptions, problem ID information, and campaign material. Visits to the site peaked at 10,500 in May 2007 and averaged about 180 hits per month during the first six months of the year. MCG substituted costly on-site visits to the States by scheduling regular conference calls with the planning team. These calls focused primarily on revised media, enforcement, outreach, and other activity plans.

NHTSA's evaluation contractor, the Preusser Research Group, worked closely with each of the SHSOs and their evaluators to collect activity information and to conduct awareness and seat belt usage surveys. PRG, in cooperation with MCG, developed a reporting schedule (see Appendix D), special forms, and guidance for the collection and reporting of such data. It also participated in the design of survey implementation, monitored the data collection process, analyzed all data, and prepared the final report. PRG also provided technical services to State evaluators. For example, two States, Iowa and Nebraska, had to modify their seat belt observation procedures and forms to report usage by pickup truck occupants. Previously States combined the data for all vehicle types. Ultimately, enforcement and media activity for both the BUIYT and CIOT efforts were reported electronically using an on-line system developed by NHTSA.

B. Program Components

The BUIYT media and enforcement efforts were timed to precede the May *Click It or Ticket* Mobilization in both years of the demonstration program. This combined effort (BUIYT and CIOT), consisted of the following major components:

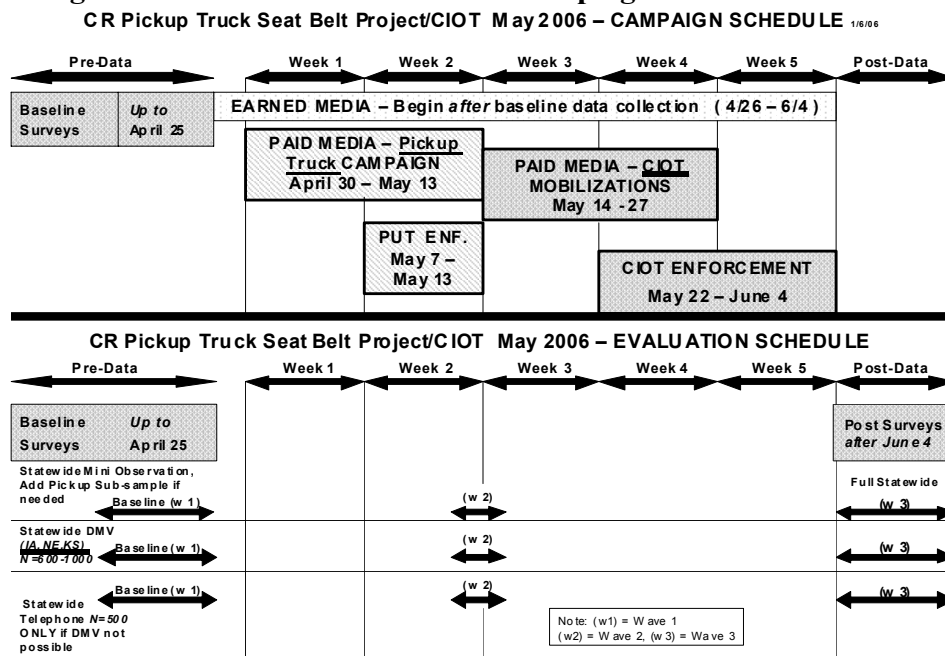
- a) **Paid and Earned Media.** Modeled after the Region 4 BUIYT initiative, various media publicized the campaign to raise public awareness of enforcement activity. All States used the same BUIYT message.
- b) **Outreach.** Several partners, both new and existing, supplemented the publicity obtained via paid and earned media.

- c) **Enforcement:** Law enforcement agencies in each State intensified seat belt enforcement during the second week of the two-week BUIYT campaign.
- d) **Evaluation:** Uniform evaluation activities were implemented across the Region, which measured level of enforcement and media activity, changes in public awareness, and changes in observed seat belt usage.

C. Program Schedule

The coordinating committee developed a campaign timeline to integrate the BUIYT program components with the May CIOT mobilizations. The 2006 timeline is shown in Figure 1 below. The May 2007 mobilization was nearly identical except that in 2007 the targeted BUIYT enforcement effort was two weeks instead of one week.

Figure 1. PUT/BUIYT and CIOT Campaign Timeline for 2006²



D. Paid Media

The objective of the paid media was to convey the perception that law enforcement officials were stepping up efforts to increase seat belt use by writing tickets. The message was “*We’re finished with warnings – we’re writing tickets over and over again. Buckle Up in Your Truck!*”

Substantial media development costs were avoided by using the *Buckle Up in Your Truck* slogan and essentially the same creative material that NHTSA had developed for Region 4. The television and radio spots had an enforcement message and they were tagged specifically for each State, using its identification and logo at the end of the spot. NHTSA provided all four States with BUIYT logos, poster art, animated Web banners, a

² The abbreviation “CR” refers to “Central Region,” which was the name of Region 7 during the project period.

10-second live liner for radio, and Spanish-language versions of the radio spot and posters. In 2007, NHTSA added new poster art, Web banners, and static-cling art to supplement the paid media activity and to complement activities and programs that various outreach partners implemented in the four States (see Appendix C for examples of material made available to the States on the Project Website).

1. Paid Media Buy Plans.

In 2006 and 2007, each State in Region 7 developed separate media buy plans for the BUIYT phase and for the CIOT phase. Tombras consulted with each State, provided guidelines and recommendations for developing their media plans, and then reviewed each plan before purchases were made, usually by a State media contractor. In 2007, Missouri delayed airing its CIOT paid media by one week in order to have five full weeks of publicity (i.e., two weeks of State PUT paid media, followed by one-week of national paid CIOT media, followed by two weeks of State CIOT media).

Reaching male occupants of pickup trucks 18 to 34 years old was accomplished by using a media buy that specifically targeted this population. The State media plans addressed strategy, frequency, reach, and budget for effectively reaching this young male target group, primarily via radio and broadcast and cable television. Several factors influenced the media plan: crash data that identified problem locations and populations at greatest risk of a crash; media market demographics that identified programs and formats where paid advertising would reach the target population; and State Highway Safety Office budgets that identified available media resources.

Media placement was purchased to achieve a targeted level of gross rating points (GRPs), an index of media intensity that represents the percentage of the target audience reached by an advertisement. For example, if a television ad reaches 50% of the target audience and is aired 5 times, it would have a GRP of 250 (*frequency* [5] x *reach* [50% of the target audience]). According to advertising industry standards described by Tombras, the States' media buy plans ranged from "strong" (with 200 TV GRPs plus 150 radio GRPs, for a total of 350 total GRPs) to "very strong" (with 300 TV GRPs plus 200 radio GRPs, for a total of 500 total GRPs).

It is important to note that NHTSA also implemented a *national* paid media effort during the CIOT phase of each year. The agency identified overlapping markets where States could share resources and informed each State about the strength of the planned national media buy in the various markets. This allowed the States to lower the amount of their CIOT media efforts and to move those dollars to the BUIYT phase of their programs. NHTSA requested a post-buy summary report from all the State media contractors to summarize the final flights and any value-added media obtained. Some States or media contractors found such post-buy analyses difficult to conduct and deliver.

Targeted Media Markets. In Iowa, Kansas, Missouri, and Nebraska, the BUIYT/ CIOT Program targeted over 13 million people in 18 media markets. It covered nearly all of the regions and nearly all of the population in every State in the Region. Table 1 lists the number of markets in each State and the estimated population in each State exposed to

the two-year program. A map of the media markets targeted in 2006 and 2007 is in Appendix B.

Table 1 Media Markets and Population by State

State	Media Market	Population
Iowa	Cedar Rapids, Des Moines, Sioux City, Davenport, Omaha (IA only), Ottumwa	2,982,000
Kansas	Topeka, Wichita/ Hutchinson, Pittsburg, KS/ Joplin, MO, Kansas City (shared with MO)	2,764,000
Missouri	St. Louis, Springfield, Cape Girardeau, Columbia/Jefferson City, Kansas City , (shared with KA)	5,842,000
Nebraska	Lincoln/Hastings/Kearney, Scotts Bluff, Box Butte County, Omaha/ Council Bluffs (IA)	1,768,000
Region 7	18 Markets (nearly 100% of the Region)	13,357,000

Television Strategy. As indicated, the media strategy for television targeted 200 to 300 GRPs in each of the key television markets in each year. The focus of this strategy was programming on broadcast networks such as NBC, FOX, UPN, and ABC because they not only reach the male 18-to-34 audience, they also reach drivers of pickup trucks. In addition, the media buy plan included a number of cable networks that reach men 18 to 34 with programming such as Spike TV, Comedy Central, TNT, TBS, BET, MTV, and ESPN. Finally, the media plan also included local broadcast stations, which have higher ratings performance than cable networks. These stations provided key opportunities to increase reach with the target audience. Programming generally focused on *Prime Time* (weekdays 7 to 10 p.m. and Sunday, 6 to 10 p.m.), *Late Fringe* (Monday to Sunday 10:30 p.m. to midnight); *Sports* (various); *Early Fringe* (weekdays 4 to 5:30 p.m.); and *Prime Access* periods (weekdays 6:30 to 7 p.m.).

Radio Strategy. States used radio advertisements to build frequency for the reach established by their ads on broadcast and cable television. As described above, the States planned to purchase radio at the “strong” to “very strong” levels of 150 to 200 GRPs per week. To reach men 18 to 34 they frequently included Alternative, Country, Top 40, and Rock formats. The radio ads were designated to be aired during *Morning Drive* (weekdays 6 to 10 a.m.), *Mid-day* (weekdays 10 a.m. to 3 p.m.) *Afternoon Drive* (weekdays 3 to 7 p.m.), and *Evenings* (weekdays 7 p.m. to midnight). One of the messages used was as follows:

“Odds are 5-to-1 that, if you're wearing your safety belt, you'll survive a truck rollover crash. It doesn't matter where you're going or how far you're driving - Buckle up in your truck.”

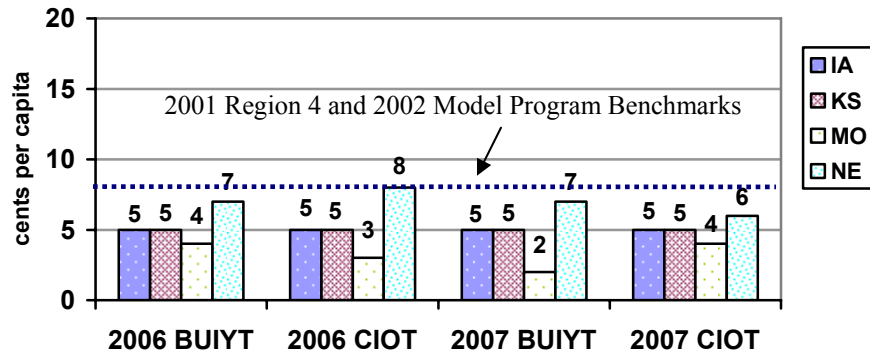
2. Paid Media Expenditures

In 2006 and 2007, the States in Region 7 spent about \$1.2 million annually on paid media for the combined BUIYT and CIOT programs.³ This ranged from a low of 6¢ per capita in Missouri (in 2006) to a high of 14¢ per capita in Nebraska in 2006 and 2007. Figure 2 shows that the per capita media expenditures for the BUIYT and CIOT programs in Region 7 were considerably lower than the two-week per capita expenditures associated with benchmark CIOT programs implemented in 2001 and 2002.⁴

Table 2. Paid Media Expenditures, by State and by Phase: 2006 and 2007

State	Actual Media Expenditures (\$ in thousands)						Per Capita Expenditures (¢/10,000 residents)					
	2006			2007			2006			2007		
	BUIYT	CIOT	Total	BUIYT	CIOT	Total	BUIYT	CIOT	Total	BUIYT	CIOT	Total
IA	\$145	\$144	\$289	\$144	\$145	\$288	5¢	5¢	10¢	5¢	5¢	10¢
KS	\$147	\$145	\$292	\$135	\$148	\$283	5¢	5¢	10¢	5¢	5¢	10¢
MO	\$235	\$134	\$369	\$183	\$229	\$412	4¢	2¢	6¢	3¢	4¢	7¢
NE	\$121	\$116	\$237	\$139	\$111	\$250	7¢	7¢	14¢	8¢	6¢	14¢
Total	\$648	\$540	\$1,187	\$600	\$633	\$1,233	-	-	-	-	-	-
Avg.	\$162	\$135	\$297	\$150	\$158	\$308	5¢	5¢	10¢	5¢	5¢	10¢

Figure 2. Two-Week, Per Capita, Media Expenditures, Region 7 versus Benchmarks



3. Paid Media Funding Allocations by Medium, Phase, and State

States allocated about two-thirds of all paid media funds to television (broadcast and cable combined), less than one-third to radio, and very little (1% to 3%) to “other” media, which consisted mostly of outdoor advertising. In 2006, States allocated 65% of their

³ In addition to the BUIYT and CIOT paid media in 2006 and 2007, Iowa conducted another wave of activity in February 2007. This was part of the four-wave “Next Generation” CIOT program, which was conducted in 2007. During this wave, an additional \$53,000 (about 2¢ per capita) was spent on paid media.

⁴ Benchmarks are referred to throughout the activity, awareness, and results sections. Unless otherwise defined, these benchmarks refer to the 2001 Region 4 CIOT Program (Solomon, 2002) and the 2002 Model Seat Belt Enforcement Demonstrations (Solomon, Ulmer, & Preusser, 2002).

BUIYT media funds to television, compared with about 57% during the CIOT phase. In 2007, however, States allocated about two-thirds of all paid media funds to television during both phases of the mobilization (see Table 3).

Table 3. Percentage of BUIYT and CIOT Media Allocations by State in 2006 and 2007

States	2006						2007					
	BUIYT			CIOT			BUIYT			CIOT		
	TV %	Radio %	Oth. %	TV %	Radio %	Oth. %	TV %	Radio %	Oth. %	TV %	Radio %	Oth. %
IA	79	21	0	79	21	0	76	24	0	79	21	0
KS	54	46	0	70	30	0	56	44	0	49	51	0
MO	54	46	0	0	100	0	71	29	0	68	32	0
NE	77	19	4	81	19	0	65	15	20	81	19	0

Out of 16 State-by-phase conditions, only 5 did not strongly favor television. In the 2006 BUIYT, Kansas and Missouri allocated similar amounts to television and radio; in the 2006 CIOT phase, Missouri allocated all of its media funds to radio; and in both phases of the 2007 program, Kansas allocated similar amounts to television and radio. In the remaining 11 conditions, more than two-thirds of all media funds were allocated to television.

4. Number of Ads Aired and Gross Rating Points

The number of ads aired and the number of GRPs achieved provide two indices of media activity. Table 4 summarizes the number ads of that ran in each State. There was very little difference between the BUIYT and CIOT phases within either year and little difference between years.

Table 4. Number of Ads: Total and per 10,000 Residents, by State 2006 and 2007 BUIYT and CIOT Campaigns

States	2006 BUIYT			2006 CIOT		
	TV Ads	Radio Ads	Total	TV Ads	Radio Ads	Total
IA	1,358	2,657	4,015	1,264	1,244	2,508
KS	1,967	2,920	4,887	2,026	4,188	6,214
MO	88	5,643	5,731	0	6,103	6,103
NE	3,004	648	3,652	5,835	685	6,520
Region	6,417	11,868	18,285	9,125	12,220	21,345
Avg.	1,604	2,967	4,571	2,281	3,055	5,336
States	2007 BUIYT			2007 CIOT		
	TV Ads	Radio Ads	Total	TV Ads	Radio Ads	Total
IA	1,935	2,109	4,044	1,500	2,358	3,858
KS	3,198	4,659	7,857	1,932	3,993	5,925
MO	2,638	922	3,560	4,175	1,701	5,876
NE	3,456	657	4,113	3,456	657	4,113
Region	11,227	8,347	19,574	11,063	8,709	19,772
Avg.	2,807	2,087	4,894	2,766	2,177	4,943

The average number of ads aired ranged from less than 14 per 10,000 residents during the 2006 BUIYT, to 16 per 10,000 in the 2006 CIOT. The total number of ads was approximately 30 per 10,000 in each year. Kansas and Nebraska consistently had higher ad rates than Iowa and Missouri for both program phases and for both years.

Table 5 shows GRP estimates where available for the BUIYT and CIOT phases, for 2006 and 2007. These data came primarily from post-buy analyses but, because not all States conducted such analyses, some estimates came from media plans. In any case, they provide a reasonable indication of the reach and intensity of the paid media efforts implemented in this program. The average GRP rating per market/per week was 445 for the eight entries. To the extent that this estimate is representative of all of the markets targeted, it suggests that the media efforts generally approached the guidelines of 350 GRPs for a “strong” program and 500 GRPs for a “very strong” program. For 2006, these data suggest an average of 386 GRPs during the BUIYT phase and 455 GRPs during CIOT. For 2007, the estimates from Iowa and Kansas suggest an average of about 555 GRPs per market, per week. In spite of relatively low per capita spending on media (compared with frequently used benchmarks), these GRP data suggest that both the BUIYT and CIOT media efforts were “strong” efforts.

**Table 5. A Summary Gross Rating Point Estimates:
2005 and 2006: RDP and CIOT Campaigns**

State	2006		2007	
	BUIYT	CIOT	BUIYT	CIOT
IA	361	-	343	-
KS	429	429	768	-
MO	379	-	-	-
NE	374	480	-	-
Avg.	386	455	555	-
	4 States	2 States	2 States	no data
IA PUT data are from 4 of 6 markets; KS data are from 5 of 5 markets; MO data are from 4 of 5 markets; NE data are from 3 of 4 markets.				

E. Earned Media

NHTSA developed media planners to assist the States in attracting State and local media coverage for the BUIYT mobilization. The planners contained a fact sheet, a news release, a drop-in news article, an op-ed article, and a sample letter to the editor regarding the program. The States also received technical assistance and “idea starters” to assist them in planning media events to publicize the campaign kickoff and to distribute the post-PUT project results to the media. Each year, the States conducted news events to kick-off their campaigns. Kansas and Missouri planned joint events, while Iowa and Nebraska conducted individual events. Each State reported the number of media events held and number of news stories aired or in print.⁵ Table 6 shows that there was much

⁵ The States had different mechanisms for tracking earned media data. The number of news events is likely to be reasonably accurate as the State HSO would likely know if someone was holding a news event with

variation from phase to phase and from year to year. On average, however, each State held four media events during each BUIYT phase and five events associated with CIOT, or, about nine events during an average mobilization. These events and the enforcement that followed resulted in an average of 157 news stories during each BUIYT phase and 331 stories associated with CIOT phase, about 488 stories for an entire mobilization. Iowa reported the largest number of news stories (with just over 800 per mobilization), followed by Kansas (620), Nebraska (390), and Missouri (130).

Table 6. Earned Media Activity for BUIYT and CIOT: 2006 and 2007

State	2006				2007			
	BUIYT		CIOT		BUIYT		CIOT	
	Media Events	News Stories	Media Events	News Stories	Media Events	News Stories	Media Events	News Stories
IA	1	337	0	389	3	286	6	605
KS	10	78	4	750	3	42	12	372
MO	1	82	1	82	1	42	3	54
NE	7	225	5	112	3	160	7	282
Total	19	722	10	1,333	10	530	28	1,313

F. Outreach

NHTSA provided the States several resources to plan outreach activities. MCG provided the States with outreach examples from other States and with a list of potential outreach partners. However, the majority of States looked primarily to established partners to distribute outreach materials and to carry the BUIYT and CIOT messages to their communities. Wherever possible, of course, the States placed special emphasis on identifying locations where pickup truck occupants could be reached. To facilitate the distribution of material, the SHSOs contacted their partners, often by e-mail, and provided them with links to outreach material.

In 2006, most States were not able to generate as much outreach support as they would have preferred. In 2007, however, more time was available for planning such efforts and for developing additional contacts. To facilitate this process, a representative from the Region 6 BUIYT demonstration project attended the first-year program debriefing to share ideas from that Region’s campaign. Because of the additional focus on outreach in 2007, the States expanded their plans for contacting a variety of organizations including EMS, fire fighters, automobile dealers’ associations, farm groups, etc.

G. Enforcement

States generally implemented one week of seat belt enforcement during the BUIYT phase, followed by two additional weeks of enforcement during CIOT, resulting in a

regard to their statewide program effort. However, the number of news stories is likely dependent on the type of tracking mechanism used. In most States, these data were dependent upon reports from partners or grantees. No State reported the use of an electronic or print media tracking service for news stories. Assuming that similar procedures were used from phase to phase (i.e., from PUT to CIOT) and from year to year, however, these data may have relevance for comparisons over time but they likely are less valid for comparisons across States.

minimum of three weeks of intensified enforcement during May 2006 and 2007. Grants with participating enforcement agencies supported the overtime seat belt enforcement. In addition, Iowa and Nebraska used equipment incentives and Iowa and Kansas used law enforcement liaisons to obtain additional participation or prompt reporting. As Table 7 shows, some States also used luncheons (often awards luncheons) and mailings to gain participation.

Table 7. Approaches for Gaining Participation of Enforcement Agencies

Approaches	IA	KS	MO	NE
Overtime	Yes	Yes	Yes	Yes
Grant Requirements	Yes	Yes	Yes	
Equipment Incentives	Yes			Yes
Awards/Luncheons	Yes	Yes		
LELs	Yes	Yes		
Letters/Mailings			Yes	Yes
States may have used additional approaches. Those indicated above were based on information found in monthly reports from the States.				

A critical measure of enforcement activity was the number of citations issued for seat belt violations, normalized based on population. Table 8 shows total seat belt citations and citations per 10,000 residents for 2006 and 2007.⁶

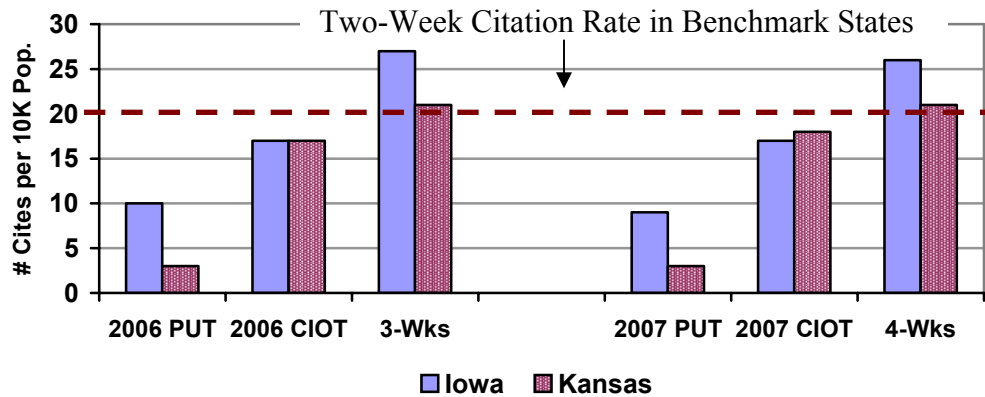
Table 8. Number and Rate of Seat Belt Citations per 10,000 Residents During BUIYT and CIOT, 2006 and 2007

State	2006				2007			
	BUIYT		CIOT		BUIYT		CIOT	
	SB Cites	Rate /10K	Cites	Rate /10K	SB Cites	Rate /10K	Cites	Rate /10K
IA	2,952	10	5,041	17	2,732	9	5,094	17
KS	952	3	4,712	17	945	3	4,913	18
MO	930	2	3,369	6	510	1	4,028	7
NE	213	1	874	5	370	2	1,441	8
GLR	5,047	4	13,996	11	4,557	3	15,477	12
Avg.	1,262	4	3,499	11	1,139	4	3,869	13

In both years, enforcement was more intense during CIOT than during BUIYT. In fact, the citation rate during CIOT was generally 3 to 4 times the rate during BUIYT. The only exception was in Iowa, which had the highest baseline citation rate and where the CIOT-related rate was just under 2 times the BUIYT-related rate.

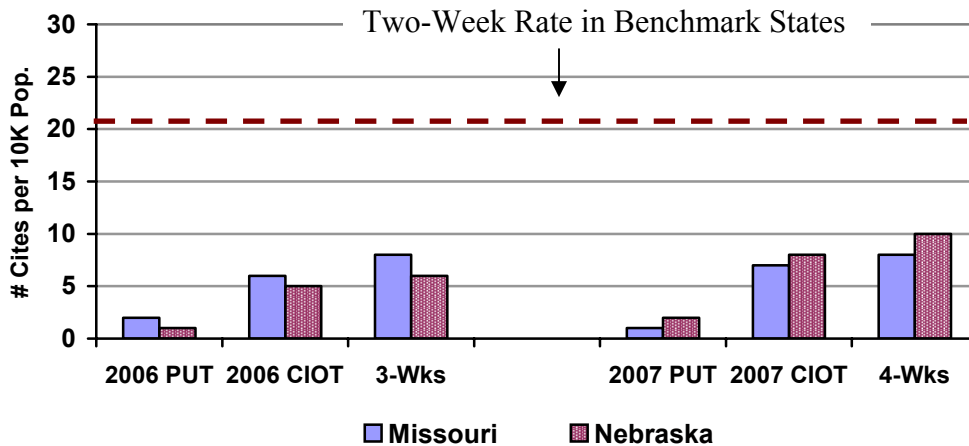
⁶ The citation numbers included in this table are slightly higher than the preliminary data included in the CIOT evaluation reported by Tison et al. (2008). That is largely due to subsequent reporting by the States. In addition, Iowa conducted an additional wave of enforcement in February 2007 as part of a “Next Generation CIOT program (Chaudhary, Tison, & Nichols, under review). During this wave, about 635 tickets (and more than 500 warnings) were issued, for a rate of about 2 citations per 10,000 residents.

Figure 3. BUIYT and CIOT Citation Rates in Iowa and Kansas Versus Benchmark Rates, 2006 and 2007



Adding citations from each phase, the *three-week* citation rates in 2006 were 27 per 10,000 in Iowa, 21 in Kansas, and 6 to 7 in Missouri and Nebraska. In 2007, the *four-week* number of citations (per 10,000 residents) was 26 in Iowa, 21 in Kansas, and 8 to 10 in Missouri and Nebraska.⁷ These data suggest that Iowa and Kansas had the most intensive overall enforcement effort in both years.

Figure 4. Citation Rates in Missouri and Nebraska versus Benchmark Rate PUT/BUIYT and CIOT Phases in 2006 and 2007



Iowa's relatively high rate was consistent across both phases of the mobilization while Kansas' rate was low during BUIYT, but equal to Iowa's rate during CIOT.⁸ Missouri and Nebraska had low citation rates during both phases and in both years. Figure 3 shows the rates in Iowa and Kansas relative to two-week benchmark rates. Figure 4

⁷ The targeted BUIYT enforcement period was one week in 2006 and two weeks in 2007. The CIOT enforcement period was two weeks in each year.

⁸ As indicated earlier, Iowa issued an additional 635 tickets and more than 500 warnings in February 2007, as part of its participation in the Next Generation CIOT program.

shows the citation rates in Missouri and Nebraska. Whether phase-by-phase (one-week to two-week rates) or aggregated across both phases (three-week to four-week rates), these rates are very low below benchmark levels.

H. Summary of Program Activity Levels

- In each of the two program years, all four States targeted the majority of their residents during the BUIYT and CIOT phases and all four States implemented at least “strong” media programs during both phases. .
- Generally, these States allocated more resources to television than to radio, although Kansas tended to allocate equal amounts to radio and TV and Missouri allocated all of its media funds to radio during one phase,.
- Ad rates were consistent across phases (and across years) but there were some differences between States, with Kansas and Nebraska generally reaching higher rates than Iowa and Missouri.
- There were consistently more news stories reported during CIOT than during BUIYT and there were consistently higher citation rates during CIOT than during BUIYT. Iowa had the highest earned media and enforcement rates, followed closely by Kansas (particularly in CIOT enforcement).
- Enforcement rates were generally lower than benchmarks (two-week CIOT rates), although the two-week CIOT rates in Iowa and Kansas were very close to the benchmarks.

III. Public Awareness of Seat Belt Messages and Enforcement, and Changes in Seat Belt Use

A. Measuring Public Awareness and Perceptions About the Program

All four States conducted motorist surveys to measure public awareness and perceptions associated with mobilization activity. Table 9 provides a summary of the characteristics and timing of these surveys.

DMV surveys were conducted by three States, Iowa, Kansas, and Nebraska. They targeted all motorists visiting selected licensing centers across each of these three States (not just pickup truck operators). These surveys used forms and procedures adapted from other seat belt surveys. The survey forms were one-page, paper-and-pencil surveys designed to measure knowledge, attitudes, and perceptions regarding seat belt use, media messages, and enforcement activities, and they had been used to measure awareness in previous CIOT mobilizations. An example of a DMV survey form is in Appendix E.

Table 9. 2006 and 2007 Awareness Surveys: Number, Type, and Size of Surveys Conducted in Region 7 States

State	Type of Survey	Year	Wave 1 Pre-PUT	Wave 2 Post-PUT	Wave 3 Post-CIOT
IA	Motorist	2006	n = 1,170	n = 1,160	n = 1,190
		2007	n = 1,260	-	n = 1,615
KS	Motorist	2006	n = 540	n = 550	n = 500
		2007	n = 1,020	-	n = 875
MO	Telephone	2006	n = 620	n = 540	n = 840
		2007	n = 363	-	n = 357
NE	Motorist	2006	n = 1,930	n = 2,120	n = 2,220
		2007	n = 1,430	-	n = 1,270

Note that samples varied to some extent from wave to wave and from question to question.

The University of Missouri at Columbia conducted an omnibus random digit dial (RDD) telephone surveys for the Missouri Highway Safety Office. These surveys were administered only to people 18 to 35 who said that they had driven a pickup truck at least once in the past 30 days. Several key questions in this survey were adapted from telephone surveys developed by NHTSA for use in CIOT mobilizations.

1. Awareness of General Seat Belt Messages (i.e., Messages to Buckle Up)

Overall, public awareness of seat belt ads increased throughout the course of both phases of each mobilization. Table 10, along with Figure 5, shows that the percentage of respondents who said that they recently *saw, read, or heard messages about seat belts* following the 2006 mobilization (BUIYT + CIOT) increased by an average of 20 percentage points. Then, from June 2006 to April 2007, there was a 21-point decline in this index (i.e., an inter-year decay) and, associated with the 2007 mobilization, there was another 18-point increase. Following each mobilization, awareness averaged 80% or greater, comparable to past benchmark programs such as the 2003 and 2004 National

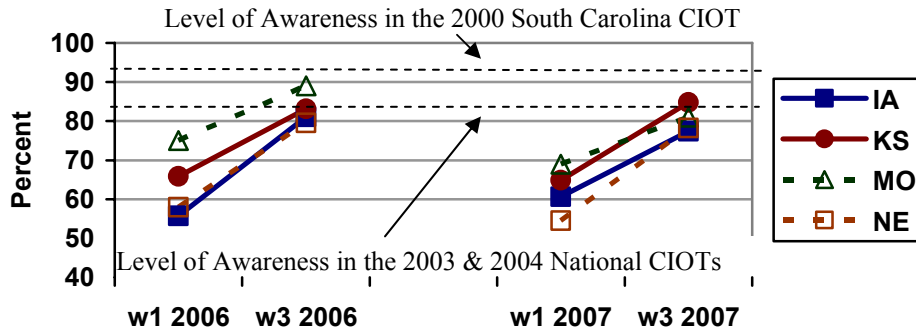
CIOT mobilizations (82 to 83%) and slightly less than the highest rate of seat belt message awareness documented in the 2000 South Carolina CIOT (95%).

Table 10. Percentage Who Have Read, Seen, Heard Messages to Buckle Up

States	2006			2007			2006 Change (Pct. Pts.)	2006 to 2007 (Pct. Pts.)	2007 Change (Pct. Pts.)	Overall Change (Pct. Pts.)
	w1 (%)	w2 (%)	w3 (%)	w1 (%)	w2 (%)	w3 (%)				
IA	56	68	81	61	-	77	+25 ***	-21 ***	+17 ***	+22 ***
KS	66	71	83	65	-	85	+17 ***	-18 ***	+20 ***	+19 ***
MO	75	-	89	69	-	81	+14 ***	-20 ***	+12 ***	+6 ***
NE	58	67	80	55	-	78	+22 ***	-25 ***	+24 ***	+20 ***
4-State Avg.	64	-	83	62	-	80	+20 ***	-21 ***	+18 ***	+17 ***
IA, KS, NE	60	69	81	62	-	80	+21	-21	+20	+20

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

Figure 5. Percentage Who Recently S/R/H Messages to Buckle Up Overall Change in 2006 and 2007, by State



Change by Wave. In 2006, Iowa Kansas and Nebraska administered awareness surveys at baseline, after BUIYT, and after CIOT. Table 11 shows that there was an average 9-point increase in awareness associated with BUIYT and an additional 12-point increase associated with CIOT. In spite of a higher baseline, the greater gain associated with CIOT suggested that this phase was more powerful than BUIYT. Both Kansas and Nebraska experienced the greatest increases during CIOT, while Iowa’s increase was linear. The patterns in Kansas and Nebraska are consistent with the fact that their 2006 CIOT ad rates were higher than their BUIYT ad rates. Kansas also reported 8 times as many news stories during CIOT as during BUIYT.

Table 11. Percentage Who Saw, Read, or Heard About Seat Belts in 2006 By Phase, in Three States That Conducted Three Waves of Surveys

States	w1 (%)	w2 (%)	w3 (%)	w2-w1 BUIYT (Pct. Pts.)	w3-w2 CIOT (Pct. Pts.)	w3-w1 Overall (Pct. Pts.)
IA	56	68	81	+12 ***	+13 ***	+25 ***
KS	66	71	83	+6 (p = 0.07)	+12 ***	+17 ***
NE	58	67	80	+9 ***	+12 ***	+22 ***
Avg.	60	69	81	+9	+12	+21

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

2. Awareness of Messages to Buckle Up in Pickup Trucks

Before any BUIYT advertisements aired in 2006, public awareness of messages to *buckle up in pickup trucks* was less than one-third the level of awareness of general messages to buckle up. In 2006, pickup-truck-related awareness increased by an average of 18 points, followed by an inter year decline of 12 points, and then a 13-point increase associated with the 2007 program.⁹ Post-program awareness was modest in both years; averaging only 35% in 2006 and 36% in 2007 (see Table 12 and Figure 6).

Table 12. Percentage Who Saw, Read, or Heard Messages to Buckle Up in Pickup Trucks

States	2006			2007			2006 Change (Pct. Pts.)	2006 to 2007 (Pct. Pts.)	2007 Change (Pct. Pts.)	Overall Change (Pct. Pts.)
	w1 (%)	w2 (%)	w3 (%)	w1 (%)	w2 (%)	w3 (%)				
IA	15	38	36	17	-	29	+21 ***	-19 ***	+11 ***	+14 ***
KS	21	35	34	22	-	33	+13 ***	-12 ***	+11 ***	+12 ***
MO	11	-	32	35	-	47	+21 ***	-	+21 ***	- ***
NE	21	38	40	18	-	34	+19 ***	-22 ***	+16 ***	+13 ***
4-State Avg.	17	-	35	23	-	36	+18	-12	+13	+19
3 State Avg.	19	37	37	19	-	32	+18	-17	+13	+13

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001; 3-State average excludes Missouri

⁹ The 13-point increase excludes Missouri in order to make the comparison with 2006 more valid. Including the change in Missouri, the average increase in 2007 was 15 points.

Figure 6. Percentage Who Saw, Read, or Heard About Buckling Up in a Pickup Truck Overall Change in 2006 and 2007, by State

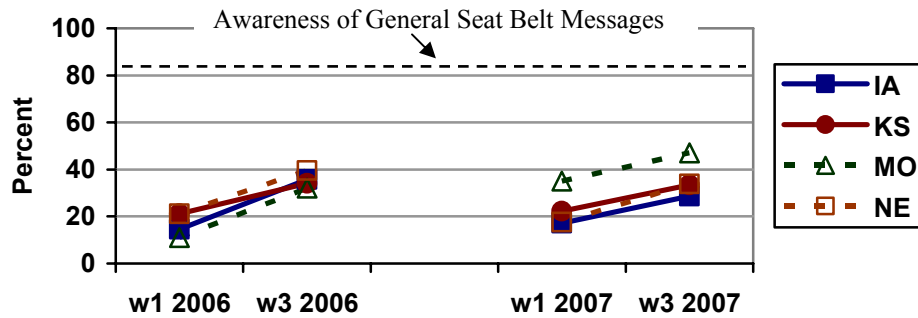


Figure 7 shows that more occupants of pickup truck than of other vehicle types were aware of messages to *use seat belts in pickup trucks*. This was the case at baseline and after program completion (in 2007). By contrast, there was no difference in awareness of *general seat belt messages* between occupants of pickup trucks and occupants of other vehicles. Only in Nebraska did awareness of BUIYT ads increase more among occupants of pickup truck than among occupants of other vehicles.

Figure 7. Awareness of Messages to Buckle Up in Pickup Trucks, by Vehicle Type

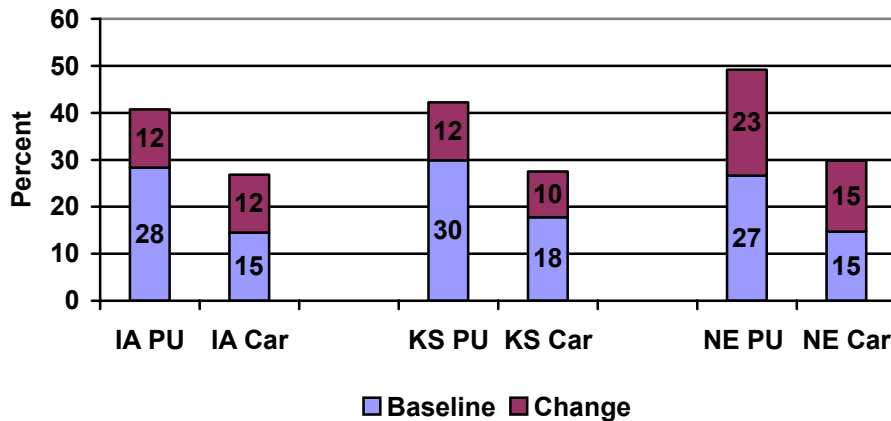
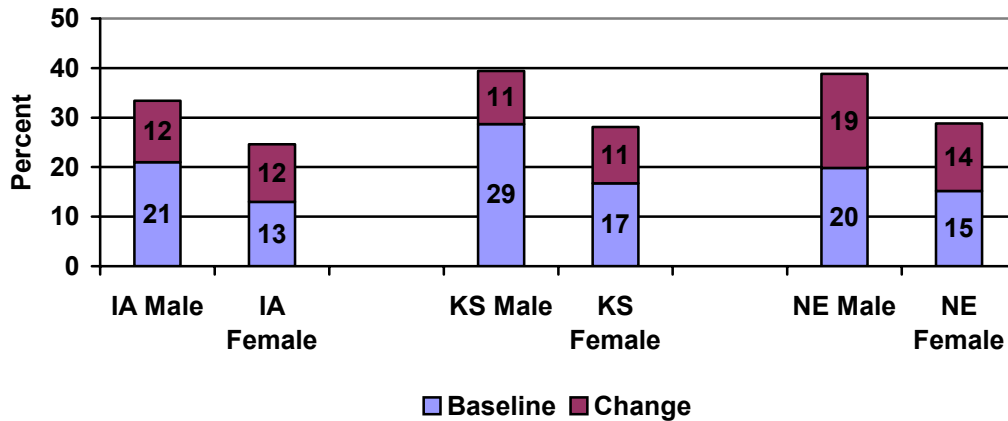


Figure 8 shows that, with regard to gender, consistently more males than females said that they saw, read, or heard about seat belt use *in pickup trucks*, at baseline and after program completion. Here again, there had been little difference between males and females in awareness of *general seat belt messages*. With regard to changes in BUIYT ad awareness, there was generally little difference between males and females (except in Nebraska, where increases were slightly greater among males than among females).

Figure 8. Awareness of Messages to Buckle Up in Pickup Trucks, by Sex



Change by Program Phase. In 2006, awareness of pickup-truck-related seat belt messages associated with BUIYT increased an average of 18 points, twice as much as awareness of general seat belt messages during the initial phase. However, there was essentially no additional change associated with CIOT (see Table 12).

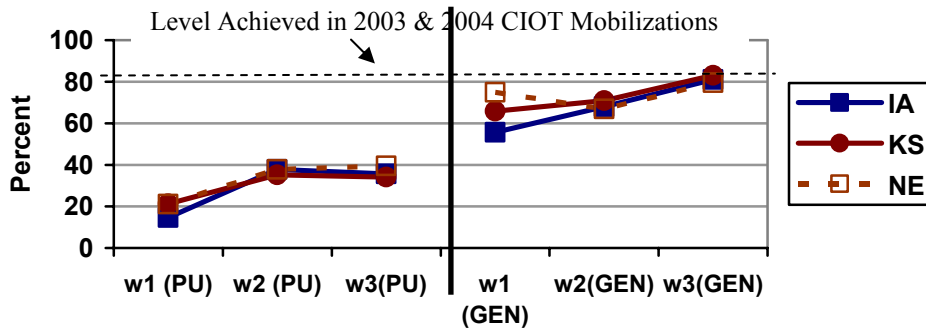
Table 12a. Percentage Who Saw, Read, or Heard About Buckling Up in a Pickup Truck in Three States That Conducted Three Waves of Surveys in 2006

States	w1 (%)	w2 (%)	w3 (%)	w2-w1 BUIYT (Pct. Pts.)	w3-w2 CIOT (Pct. Pts.)	w3-w1 Overall (Pct. Pts.)
IA	15	38	36	+23 ***	-2 n.s.	+21 ***
KS	21	35	34	+14 ***	-1 n.s.	+13 ***
NE	21	38	40	+17 ***	+2 n.s.	+19 ***
Avg.	19	37	37	+18	-0.5	+18

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

Figure 9 shows a significant increase in awareness of messages to buckle up when riding in pickup trucks immediately following the BUIYT phase (average = +18 points), followed by little or no change associated with CIOT (average = -1 point). This figure also shows that there was a much more modest increase in awareness of general messages to buckle up associated with BUIYT (average = +3 points), followed by a much larger increase associated with CIOT (average = +18 points). While the final (post-CIOT) awareness of general seat belt messages was about the same as that reached in the 2003 and 2004 National CIOT mobilizations (82 to 83%), the post-CIOT awareness of messages to buckle up in pickup trucks was much lower (about 40%).

Figure 9. Percentage Who Recently Saw, Read, or Heard Seat Belt Messages, by Phase, in 2006 Pickup Truck Messages (PU) and General Seat Belt Messages (GEN)



3. Recognition of the *Click It or Ticket* Slogan

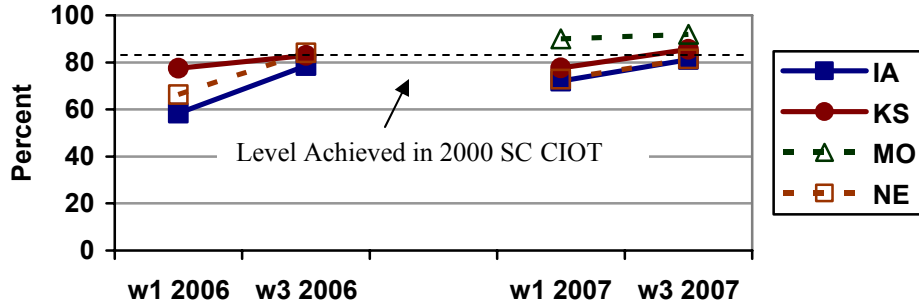
In 2006, there was an average 15-point increase in recognition of the *Click It or Ticket* (CIOT) slogan. From June 2006 to April 2007, such recognition declined by 8 points, followed by a 9-point increase during the 2007 program (see Table 13). The two-year effort was associated with a net 15-point increase in CIOT slogan recognition, the final level of which was uniformly high in all four States (averaging 82 to 85% in both years). This is as high a level as has been reached in any of the benchmark programs. The 2000 CIOT mobilization in South Carolina, for example, achieved 80% awareness of the CIOT slogan (see Figure 10).

Table 13. Percentage Who Recognized the *CIOT* Slogan

States	2006			2007			2006 Change (Pct. Pts.)	2006 to 2007 (Pct. Pts.)	2007 Change (Pct. Pts.)	Overall Change (Pct. Pts.)
	w1 (%)	w2 (%)	w3 (%)	w1 (%)	w2 (%)	w3 (%)				
IA	58	61	79	72	-	81	+20 ***	-7 ***	+9 ***	+23 ***
KS	78	73	83	78	-	86	+5 *	-5 *	+8 ***	+8 ***
MO	-	-	-	90	-	92	- -	- -	+2 Ns	- -
NE	66	63	84	73	-	81	+18 ***	-11 ***	+9 ***	+15 ***
4-State Avg.	-	-	-	78	-	85	-	-	+7	-
3-State Avg.	67	65	82	74	-	83	+15	-8	+9	+15

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001; 3-State Average excludes Missouri

Figure 10. Percentage Recognizing the CIOT Slogan Overall Change in 2006 and 2007, by State



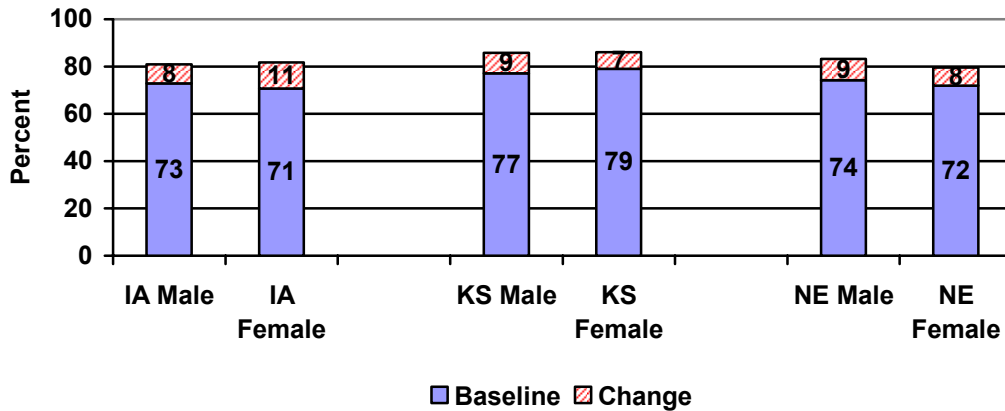
Change by Phase (in 2006). Table 14 shows that, in 2006, there was little or no change in recognition of the CIOT slogan associated with the BUIYT phase (average = -2 points), but there was a large and significant increase associated with the CIOT phase in all three States (average = +17 points).

Table 14. Percentage Who Recognized the CIOT Slogan in 2006

States	w1 (%)	w2 (%)	w3 (%)	W2-w1 BUIYT (Pct. Pts.)	w3-w2 CIOT (Pct. Pts.)	w3-w1 Overall (Pct. Pts.)
IA	58	61	79	+2 ns	+18 ***	+20 ***
KS	78	73	83	-5 (.06)	+10 ***	+5 ***
NE	66	63	84	-3 *	+21 ***	+18 ***
Avg.	67	65	82	-2	+17	+15

Notes: ns non-significant; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Figure 11. Percentage Who Recognized the CIOT Slogan, by Sex (2007)



Baseline recognition of the CIOT slogan was high (71 to 79%), with little or no difference between males and females. Because of these high baselines, post-program

change was modest (7 to 11 percentage points), with little or no difference between males and females.

4. Recognition of the Buckle Up in Your Truck Slogan

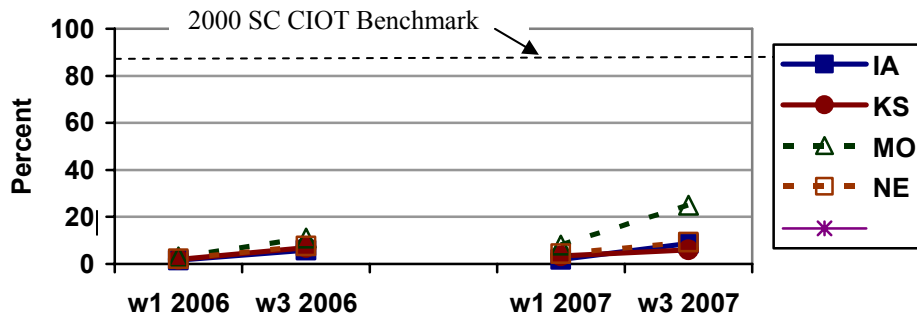
Table 15 shows the percentages and changes in awareness of the BUIYT slogan. At baseline recognition was very low (2 to 3 percent), increasing by an average of 5 to 6 percentage points in conjunction with the 2006 mobilization. Recognition then declined by about 4 points between programs and increased again (by an average of 5 to 8 points) associated with the 2007 effort. Immediately after the end of the two-year program, BUIYT recognition ranged from 6% in Kansas to 25% in Missouri. On average, 8 to 12% of respondents recognized the slogan, compared with 2% at baseline. While this represented some change, Figure 12 shows that the average two-year gain (6 to 10 percentage points), was much smaller than the average gain in recognition of the *CIOT* slogan (15 points).

Table 15. Percentage Who Recognized the *BUIYT* Slogan

States	2006			2007			2006	2006	2007	Overall
	w1 (%)	w2 (%)	w3 (%)	w1 (%)	w2 (%)	w3 (%)	Change (Pct. Pts.)	to 2007 (Pct. Pts.)	Change (Pct. Pts.)	Change (Pct. Pts.)
IA	2	11	6	2	-	9	+4 ***	-4 ***	+7 ***	+7 ***
KS	2	9	7	3	6	6	+5 ***	-4 **	+3 **	+4 ***
MO	3	-	11	8	-	25	+8 ***	-3 ns	+17 ***	+22 ***
NE	2	11	8	4	-	9	+5 ***	-3 ***	+5 ***	+7 ***
4-State Avg.	2	-	8	4	-	12	+6	-4	+8	+10
3-State Avg.	2	10	7	3	-	8	+5	-4	+5	+6

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001; 3-State Average excludes MO

Figure 12. Percentage Who Recognized the *BUIYT* Slogan Baselines and Change in 2006 and 2007, by State



Change by Wave. In 2006, recognition of the *BUIYT* slogan associated with the BUIYT phase of the mobilization increased modestly (average of 8 points in the three States that

conducted post BUIYT surveys). However, there was a slight decline in awareness of this pickup-specific slogan associated with the CIOT phase (-3 points), leaving a very modest net increase of 5 points. Thus, with regard to this index, efforts during the CIOT phase not only did not increase recognition of the BUIYT slogan, they were associated with a slight decline in such recognition (see Table 16).

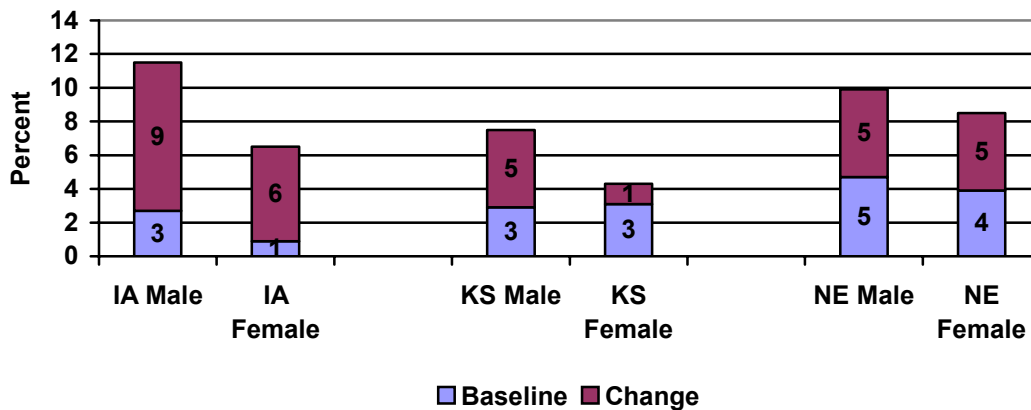
Table 16. Percentage Who Recognized the BUIYT Slogan, by Phase in 2006

States	w1 (%)	w2 (%)	w3 (%)	w2-w1 BUIYT (Pct. Pts.)	w3-w2 CIOT (Pct. Pts.)	w3-w1 Overall (Pct. Pts.)
IA	2	11	6	+9 ***	-5 ***	+4 ***
KS	2	9	7	+7 ***	-2 ns	+5 ***
NE	2	11	8	+9 ***	-3 ***	+5 ***
Avg.	2	10	7	+8	-3	+5

Notes: ^{ns} non-significant; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

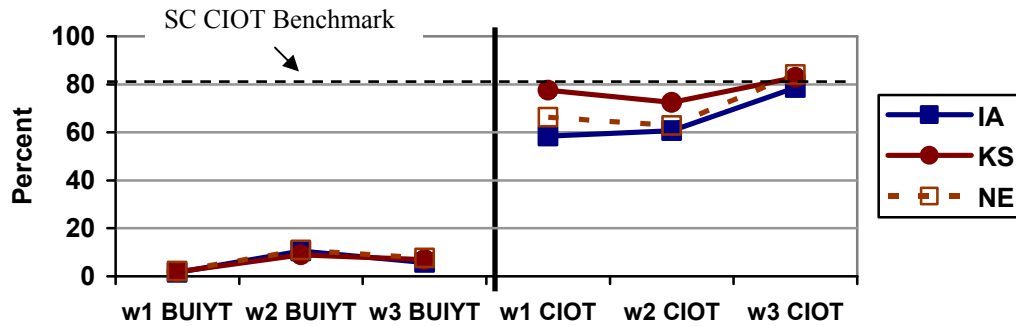
Figure 13 shows the 2007 increases by gender. It suggests that recognition increased slightly more among males than among females.

Figure 13. Percentage Who Recognized the BUIYT Slogan, by Sex (2007)



Comparison of Levels and Changes in Slogan Recognition. Change in recognition of the two slogans was phase-related. The modest increase in BUIYT awareness occurred during the BUIYT phase and the much larger increase in CIOT awareness occurred during the CIOT phase. Figure 14 shows these two patterns, as well as the large difference between awareness of the two slogans at baseline and after the 2006 program. The key finding here is that, in spite of the “strong” media effort, very few respondents recognized the BUIYT slogan after program completion. While there was a modest increase during the BUIYT phase, much of that increase was lost during CIOT.

**Figure 14. Percentage Who Recognized the CIOT and BUIYT Slogans:
At Baseline and After Each Phase of the 2006 Mobilization**



5. Awareness of Special Police Efforts to Ticket for Seat Belt Violations

Awareness of special enforcement efforts to ticket seat belt violations greatly increased in 2006 (+26 percentage points). Because of variations in the way the question was asked, only two States’ data were comparable in 2007. In these two States, Kansas and Nebraska, there was a large inter year decline (-29 points) from 2006 to 2007, followed by another large increase (+29 points) associated with the 2007 program. This left a two-year net increase of 26 points. Based on the data from all four States in 2006 and from these two States in 2007, Table 17 shows that there was a large and significant increase in the perception that police were enforcing the seat belt laws in both years of the mobilization.¹⁰

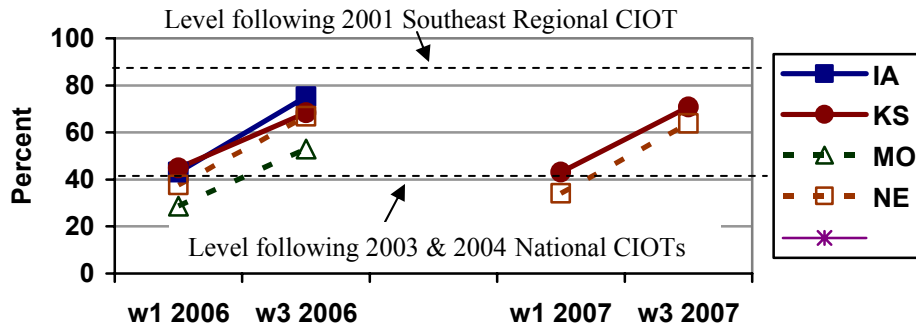
Table 17. Awareness of Special Efforts by Police to Ticket for Seat Belt Violations

States	2006			2007			2006 Change (Pct. Pts.)	2006 to 2007 (Pct. Pts.)	2007 Change (Pct. Pts.)	Overall Change (Pct. Pts.)
	w1 (%)	w2 (%)	w3 (%)	w1 (%)	w2 (%)	w3 (%)				
IA	43	60	75	-	-	-	+32 ***	-	-	-
KS	45	52	68	43	-	71	+23 ***	-25 ***	+28 ***	+26 ***
MO	29	-	53	-	-	-	+24 ***	-	-	-
NE	38	52	67	34	-	64	+29 ***	-33 ***	+30 ***	+26 ***
KS & NE	41	52	68	39	-	67	+26	-29	+29	+26
4-State Avg.	39		66				+27			

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001; 3-State Average excludes MO

¹⁰ It also appears that most of the gain is lost over one year’s time. That is, at least in part, due to the way the question was worded, which was “In the past 30 days, have you ...?” (or) “Have you recently ...?”

Figure 15. Percentage Awareness of Special Police Enforcement Efforts Levels and Change in 2006 and 2007, by State



Change by Wave. In 2006, the series of three waves of observational surveys in Iowa, Kansas, and Nebraska showed a significant increase in awareness of special police efforts to enforce seat belt laws associated with both the BUIYT phase (+13 points) and the CIOT phase (+16 points), resulting in a post-CIOT level of 70%. The public perceived the enforcement and saw the publicity during each phase. The CIOT phase was likely the strongest in this regard. In spite of a higher baseline, it was associated with a slightly greater increase than was the BUIYT phase. The rate of enforcement awareness following BUIYT (55%) was higher than the rates recorded following several past mobilizations (about 40%) and the rate achieved during CIOT (70%) was much higher than these benchmarks. Still, it was less than the rate achieved by the original 1993 CIOT in North Carolina (with 85% awareness of checkpoints) and the average rate achieved in the 2001 CIOT in Region 4 Region (86% awareness of special enforcement efforts). In sum, however, the awareness achieved by the Region 7 BUIYT/CIOT mobilizations was very high. Table 18 shows the levels of awareness after each phase in the States that conducted three waves of surveys in 2006.

Table 18. Percentage in 2006 Aware of Special Police Efforts, by Phase

States	w1 (%)	w2 (%)	w3 (%)	w2-w1 BUIYT (Pct. Pts.)	w3-w2 CIOT (Pct. Pts.)	w3-w1 Overall (Pct. Pts.)
IA	43	60	75	+17 ***	+15 ***	+32 ***
KS	45	52	68	+7 *	+16 ***	+23 ***
NE	38	52	67	+14 ***	+15 ***	+29 ***
Avg.	42	55	70	+13	+16	+28

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

6. Perceived Likelihood of Receiving a Ticket

Most occupants over-estimate the risk of being stopped by the police and ticketed for not buckling up (if one drove or rode unbuckled for six months). However, the baseline levels for this index were relatively consistent across the States; 40 to 47% in 2006 and

40 to 52% in 2007.¹¹ There were slight changes from these baseline levels, averaging only 2 to 3 points in each year and with a comparable inter-year decay (see Table 19). As a result, the perceived risk of being ticketed did not increase nearly as much as awareness of messages to buckle up, the CIOT slogan, or special efforts by police to enforce seat belt laws.

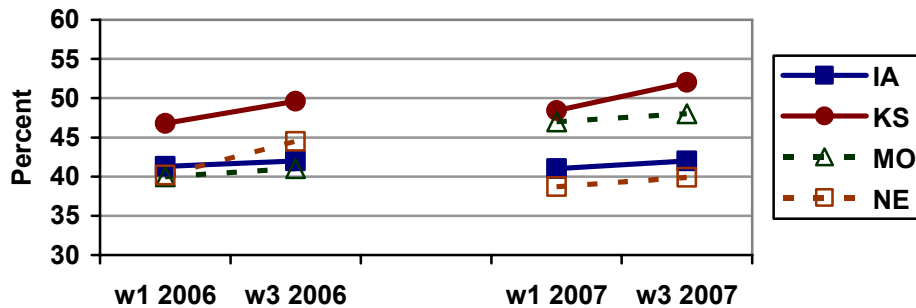
Table 19. Perceived Likelihood of Receiving a Ticket (if Unbuckled for Six Months)

States	2006			2007			2006 Change (Pct. Pts.)	2006 to 2007 (Pct. Pts.)	2007 Change (Pct. Pts.)	Overall Change (Pct. Pts.)
	w1 (%)	w2 (%)	w3 (%)	w1 (%)	w2 (%)	w3 (%)				
IA	41	38	42	41	-	42	+1 ns	-1 ns	+1 ns	+1 ns
KS	47	49	50	48	-	52	+3 ns	-1 ns	+4 ns	+5 (.06)
MO	40	-	41	47	-	48	+1 ns	+6 *	+1 ns	+8 *
NE	40	42	45	39	-	40	+4 **	-6 ***	+1 ns	0 ns
4 States	42	-	44	44	-	46	+2	-1	+2	+3
3 States	43	43	45	43	-	45	+3	-3	+2	+2

Notes: ^{ns} non-significant; * p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001; 3-State Average excludes MO

There were some indications of increases in nearly every State associated with at least one of the two mobilizations but, as indicated, these changes were very small. Perceived risk was higher in Kansas than in the other three States in 2006 and there was a significant inter year increase in Missouri. Ironically, the perceived risk of the police issuing a ticket for not buckling up was not highest in Iowa, the State that had the highest citation and usage rates. Figure 16 shows the levels and changes in this index for all four States and for both years.

Figure 16. Perceived Risk of Getting a Ticket for Riding Unbuckled Overall Change in 2006 and 2007, by State



Change by Wave. Table 20 suggests that, in 2006, there was little consistent evidence of change in perceived risk of getting a ticket during either phase of the program. On

¹¹ These percentages represent the sum of people who responded that they would “always” or “nearly always” receive a ticket if they drove unbuckled for a period of six months.

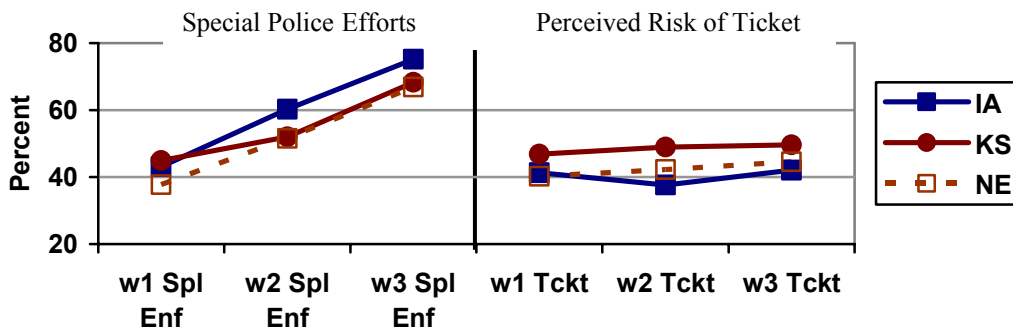
average, there was a 3-point gain associated with CIOT and no gain associated with BUIYT. These averages were heavily influenced by fluctuations in Iowa. Neither Kansas nor Nebraska showed a larger increase associated with CIOT than with BUIYT. Based on these data, it appears that the perceived risk of being stopped and ticketed for a seat belt violation was not as much affected by the program as was awareness of special enforcement activities (see Figure 17).

**Table 20. Perceived Risk of Ticket for Riding Unbuckled in 2006
By Phase in Iowa, Kansas, and Nebraska**

States	w1 (%)	w2 (%)	w3 (%)	w2-w1 BUIYT (Pct. Pts.)	w3-w2 CIOT (Pct. Pts.)	w3-w1 Overall (Pct. Pts.)
IA	41	38	42	-4 (.07)	+4 *	+1 ns
KS	47	49	50	+2 ns	+1 ns	+3 ns
NE	40	42	45	+2 ns	+2 ns	+4 **
Avg.	43	43	45	+0	+3	+3

Notes: ^{ns} non-significant; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

**Figure 17. A Comparison of Awareness of Special Enforcement Efforts With
The Perceived Likelihood of Receiving a Ticket for Not Buckling Up
By Measurement Wave in 2006**



7. Summary of Awareness, Perception, and Recognition Results

- Public awareness of general messages to buckle up increased significantly in all States during the BUIYT/CIOT programs in both 2006 and 2007.
- Awareness was greater during the CIOT phase than during BUIYT.
- Although the levels of public awareness were greater than those reached in the 2003 and 2004 national CIOT mobilizations, they were not as great as those reached in some past mobilizations (e.g., the 2001 Region IV CIOT program and the 2002 “model” programs).
- In all four States, fewer people were aware of messages to buckle up in pickup trucks than they were of aware of general messages to buckle up.

- Awareness of the pickup-truck-related messages peaked during the BUIYT phase and then declined during the CIOT phase.
- Recognition of the CIOT slogan was uniformly high in all four States following each mobilization; increases were almost exclusively associated with the CIOT phase and the highest levels were achieved in 2007; there were no practical differences between the States on this index.
- Recognition of the BUIYT slogan was extremely low, both before and after each mobilization; although there were modest increases during BUIYT, the average level of recognition of the pickup truck-specific slogan remained under 20%, while post-program levels of CIOT slogan recognition averaged 80%.
- The index that showed the most change was awareness of special efforts by police to ticket for seat belt violations, which increased by nearly 30 percentage points in each year of the program.
- Post-program awareness of enforcement in the Region 7 program was higher than in the 2003 and 2004 National CIOT mobilizations, but lower than the levels achieved in some of the most intensive programs and increases occurred during both phases of the mobilization.
- In spite of the significant increases in awareness of general seat belt messages, the CIOT slogan, and special enforcement activities, there was little change in the perceived likelihood of receiving a ticket if riding unbuckled; while there may have been a slight gain in this index, it was not statistically significant.

B. Measuring Change in Observed Seat Belt Use

All States used observational surveys to measure changes in seat belt use. The results of these surveys, which included full statewide observational surveys (conducted in every State during the month of June and meeting the requirements of Section 157; U.S. Code 23¹²) and mini-surveys (usually sub-samples taken from the full statewide survey¹³) Following is a summary of the various surveys conducted in each State.

Iowa. In 2006, Iowa conducted three waves of 33-site, mini-observational surveys to evaluate phase-related and overall impact of the BUIYT/CIOT mobilization on seat belt use. In 2007, Iowa conducted two 100-site, statewide surveys to evaluate the overall impact of the two-phase mobilization. In both years, Iowa weighted its 100-site post-program surveys to determine “official” statewide rates.

Kansas. In 2006, Kansas conducted three waves of 60-site, mini-observational surveys to evaluate the program, overall and by phase. In 2007, two 120-site mini-surveys were conducted to measure overall program impact. (In 2006, Kansas also conducted two 120-site surveys and these results were available for comparison with the overall results from the 60-site surveys.) In each program year, Kansas conducted a weighted, 548-site, post-CIOT survey to determine the State’s “official” statewide usage rate.

Missouri. In 2006, two waves of (40-site, pickup-truck-only) mini-surveys were conducted to assess the impact of the BUIYT phase on usage in pickup trucks. In both years, States conducted three waves of (42-site) mini-surveys to measure impact, overall and by phase. Most States conducted a full statewide survey (460 sites) after each mobilization to determine the State’s official usage rate.

Nebraska. Three 52-site mini-surveys were conducted in 2006 and two 50-site mini-surveys were conducted in 2007 to measure change associated with the BUIYT/CIOT mobilizations. Because usage in pickup trucks could not be determined in the 2006 post-CIOT survey (w3), this rate was estimated (by PRG), based on the ratio of pickup-truck-to-total use in the three other surveys. Each year, States conducted full statewide (201-site) surveys after CIOT to determine the “official” statewide usage.

Pre-to-post mini-surveys provided the key indices to measure program impact, overall and by phase. Full statewide surveys, which were weighted to be representative of the State, were used to measure year-to-year variation in “official” rates and, in addition, they provided a standard for examining the validity and reliability of statewide mini-surveys.

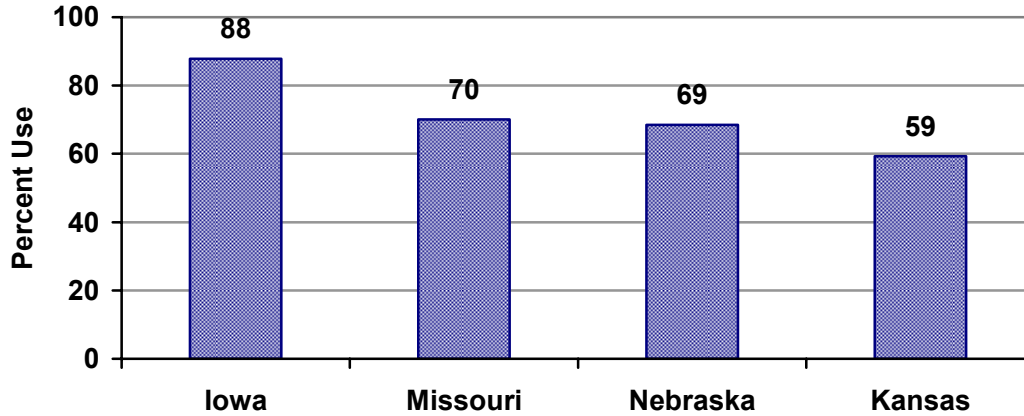
¹² These requirements were established as part of Section 157 of the Transportation Equity Act for the 21st Century (TEA-21) and are found in Section 157, 23 U.S. Code. A copy of these guidelines can be found in Appendix E (supplement to this report).

¹³ A *mini-survey* is something less than a full statewide survey. A *sub-sample survey* is a mini-survey in which the sites are selected from the list of sites in the full statewide survey. By using such a sub-sample, additional smaller surveys (such as pre-BUIYT and post-BUIYT surveys) can be conducted more economically and their results can be compared with the results from the full statewide survey. In addition, it is possible to look historically at usage rates in the sub-sample of sites as they have been part of past statewide surveys. In nearly all cases, the mini-surveys identified in Table 4 were sub-sample surveys.

1. Baseline Levels of Seat Belt Use

Iowa is the only State in the Region 7 with a primary seat belt law. As such, its baseline seat belt usage was significantly higher than in the other three States. This is an important consideration for interpreting the impact of the BUIYT/CIOT efforts as baseline is nearly always negatively related to changes in usage, particularly at very high or very low levels. As Figure 18 shows, the baseline (pre-mobilization) rate in Iowa was about 88%, followed by 70% in Missouri and Nebraska and 59% in Kansas.

Figure 18. Baseline Seat Belt Use Rates in Region 7



2. Changes in Seat Belt Usage (all vehicle types)

As described, three waves of mini-surveys were conducted to measure change associated with *each phase* of the 2006 program. Surveys with larger sample sizes were also available in Iowa, Kansas, and Nebraska to measure *overall* program change (i.e., not phase-specific change). In 2007, only Missouri conducted three waves of surveys. The remaining three States conducted only two waves of surveys (baseline and post-CIOT). Finally, as indicated, all States conducted their official statewide surveys in June of each year (post-CIOT), thus providing another (year-to-year) index of change.

Table 21 shows the combinations of surveys available for measuring program impact. The key surveys results used for measuring impact are highlighted. Other results (non-highlighted) were used primarily for comparison purposes. As this table shows, there was little variation in the estimates provided by different sample sizes. The largest differences between survey results were found between the official *weighted* statewide rates and the *unweighted* results of the mini-surveys (primarily in Nebraska).

**Table 21. Survey Results Used to Assess Changes in Observed Usage:
All-Vehicle Usage Rates for 2006 and 2007**

State	Type		2006			2007		
			Pre-BUIYT	Post-BUIYT	Post-CIOT	Pre-BUIYT	Post-BUIYT	Post-CIOT
Iowa	Mini	Sites ->	33	33	33	-	-	-
		N ->	2,512	2,004	2,530	-	-	-
		Belt Use ->	87.8%	87.6%	89.2%	-	-	-
	Full	Sites ->	-	-	100	100	-	100
		N ->	-	-	13,800	13,661	-	15,302
		Belt Use ->	-	-	89.6	91.4	-	90.9
Kansas	Mini	Sites ->	60	60	60	-	-	-
		N ->	7,637	6,819	6,452	-	-	-
		Belt Use ->	59.3	59.6	69.4	-	-	-
	Mini	Sites ->	120	-	120	120	-	120
		N ->	15,139	-	13,764	13,770	-	13,035
		Belt Use ->	58.7	-	71.9	70.6	-	73.5
	Full	Sites ->	-	-	548	-	-	548
		N ->	-	-	≈59,000	-	-	59,151
(wt)	Belt Use ->	-	-	73.5	-	-	75.0	
Missouri	Mini	Sites ->	40	40	-	-	-	-
	Pickups	N ->	3,039	3,119				
	Only →	Belt Use ->	55.9	60.3				
	Mini	Sites ->	42	42	42	42	42	42
		N ->	10,628	10,628	12,064	8,558	9,277	9,370
		Belt Use ->	70.1	74.5	76.0	66.9	72.4	76.2
	Full	Sites ->	-	-	460	-	-	460
		N ->	-	-	117,901	-	-	114,432
	(wt)	Belt Use ->	-	-	75.2	-	-	77.2
Nebraska	Mini	Sites ->	52	52	52	50	-	50
		N ->	8,589	10,773	10,454	5,558	-	5,428
		Belt Use ->	68.5	64.2	73.4	74.5	-	74.9
	Full	Sites ->	-	-	201	-	-	201
		N ->	-	-	≈25,000	-	-	≈25,000
	(wt)	Belt Use ->	-	-	76.0	-	-	78.7

Notes: “wt” = official statewide “weighted” usage rate; the final statewide rate shown for Iowa (90.9%) is an unweighted rate, as was the pre-program rate; the official “weighted” rate was 91.3%.

Kansas had a large gain in 2006 (associated with CIOT) and a modest overall gain in 2007, resulting in a highly significant (14-point) gain over the two years. *Iowa*, with the highest baseline usage, experienced a slight gain in 2006 (associated with CIOT), but no change in 2007 for a 3-point overall gain. Following an initial decline measured during the 2006 BUIYT, *Nebraska* had a large and significant gain associated with the 2006 CIOT program and a slight overall gain in 2007. The net two-year increase was a significant 6.4 percentage points. Finally, *Missouri* experienced modest, but significant gains during both phases in both years. However, part of this gain was negated by a 9-point inter year decline between 2006 and 2007. Over the two years, Missouri experienced a significant 6-point gain.

Figure 19. Changes in Seat Belt Use by State, 2006 and 2007

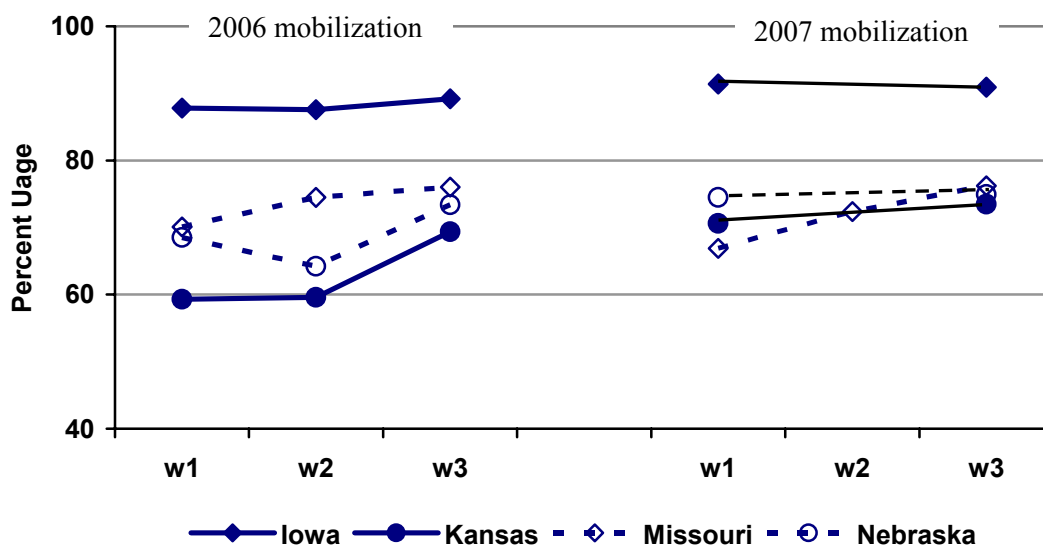


Table 22 shows the mini-survey results in the context of each State’s official (weighted) usage rates. Over the two years (from 2005 to 2007), the average increase in the official rate was 2.4 points, while the average increase in mini-surveys (from baseline 2006 to post-CIOT in 2007) was 7.6 points. The difference between these two estimates of change owes primarily to the fact that, in all States except Iowa, there was a substantial decline from the official 2005 rate to the baseline 2006 rate.

**Table 22. Mini-Survey Results in the Context of Official Statewide Usage Rates
Percentage Observed Seat Belt Use from 2005 through 2007**

State	2005 Official	2006 Baseline	2006 Post-CIOT	2006 Official	2007 Baseline	2007 Post-CIOT	2007 Official
IA	87.1	87.8	89.2	89.6	91.4	90.9	91.3
KS	69.0	58.7	71.9	73.5	70.6	73.5	75.0
MO	77.4	70.1	76.0	75.2	66.9	76.2	77.2
NE	79.2	68.5	73.4	76.0	74.5	74.9	78.7
Avg.	78.2	71.3	77.6	78.6	75.9	78.9	80.6

3. Seat Belt Use in Pickup Trucks Versus Use in Other Vehicles

Figure 23 show that every State experienced a significant increase in observed seat belt use over the two-year BUIYT/CIOT program. Similar overall increases occurred among occupants of pickup trucks (+8 points) and occupants of other vehicles (+8 points). Greater impact was associated with the 2006 mobilization (6- to 7-point average gain) than with the 2007 mobilization (2- to 3-point gain). Finally, within 2006, the CIOT phase was associated with greater average gain (6 to 7 points) than the BUIYT phase (no gain).

Table 23. Observed Usage in Pickup Trucks and in Non-Pickup Vehicles By State and by Measurement Wave, 2006 and 2007

Usage in Pickups by Wave						2006				2007	2 Yr
State	w1 %	w2 %	w3 %	w4 %	w6 %	PUT w2-w1 Pts.	CIOT w3-w2 Pts.	Total w3-w1 Pts.	Inter-Year Chg. Pts.	Total w6-w4 Pts.	w6-w1 Pts.
IA	81	79	87	88	87	-2 ns	+8 ***	+6 ***	+1 Ns	-1 ns	+6 ***
KS	43	43	52	55	57	+1 ns	+9 ***	+10 ***	+3 *	+1 ns	+14 ***
MO	56	60	65	55	64	+5 ***	+5 ***	+10 ***	-10 ***	+9 ***	+8 ***
NE	56	51	(59)	60	59	-5 ***	(+8) ***	(+3) ns	(+1) Ns	-1 ns	+3 (0.08)
Avg.	59	58	66	65	67	0	+7	+7	-1	+2	+8
Usage in Non-Pickups by Wave						2006				2007	2-Yr
State	w1 %	w2 %	w3 %	w4 %	w6 %	PUT w2-w1 Pts.	CIOT w3-w2 Pts.	Total w3-w1 Pts.	Inter-Year Chg. Pts.	Total w6-w4 Pts.	w6-w1 Pts.
IA	90	90	91	92	92	0 ns	+1 ns	+1 ns	+2 **	0 ns	+2 ***
KS	65	65	75	75	79	0 ns	+10 ***	+11 ***	0 ns	+3 ***	+14 ***
MO	74	78	80	72	81	+4 ***	+3 ***	+6 ***	-9 ***	+9 ***	+7 ***
NE	71	67	(78)	80	80	-4 ***	(+11) ***	(+7) ***	(+2) *	0 ns	+9 ***
Avg.	75	75	81	80	83	0	+6	+6	-1	+3	+8

Notes: "ns" = non-significant; * = p ≤ 0.05; ** = p ≤ 0.01; *** = p ≤ 0.001; w3 entries for Nebraska are estimates based on changes in overall usage and on the relationship between pickup and overall usage

In every State, occupants of pickup trucks significantly increased their seat belt use during the 2006 CIOT phase (average increase = 7 points) and, in every State except Iowa, usage among occupants of other vehicles increased significantly as well (average increase = 6 points). Only *Missouri* experienced a significant gain associated with the

2006 BUIYT phase (5 points).¹⁴ In Iowa and Missouri, the impact of the 2006 program on occupants of pickup trucks may have been greater than on occupants of other vehicles. In Kansas, increases were similar for both vehicle categories (9 to 10 points) and, in Nebraska; there was a slightly greater increase in usage among occupants of non-pickup vehicles (+11 points) than among occupants of pickup trucks (+8 points).¹⁵

4. State-Specific Trends

The following figures show changes in usage for each vehicle type in each State.

Figure 20. Observed Usage Rates in Iowa, Overall and by Vehicle Type

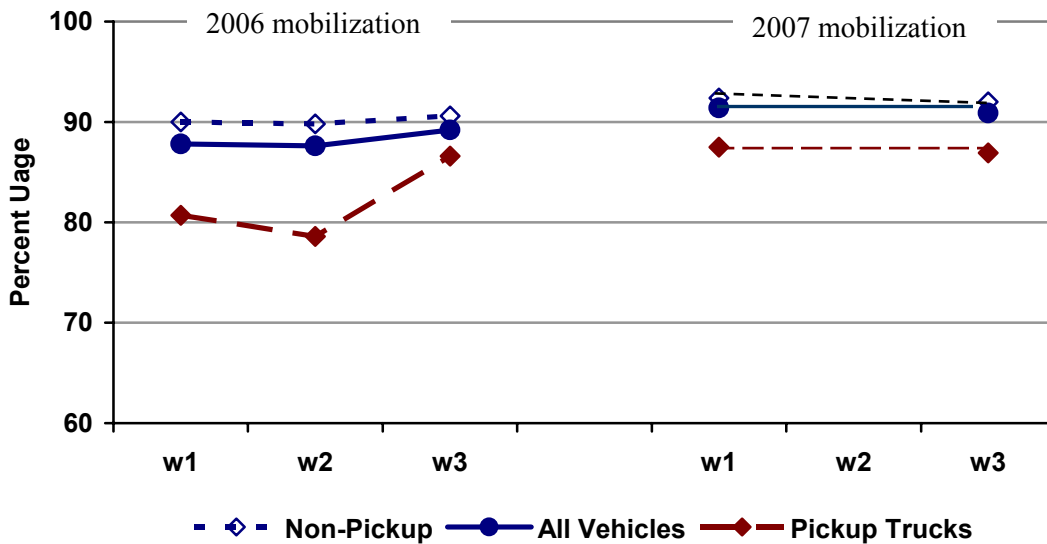


Figure 20 shows the large and significant increase in usage in pickup trucks associated with the 2006 CIOT phase in Iowa. Although there was a slight increase in all vehicles during the 2006 campaign, the increase in pickup trucks is the most remarkable. There was virtually no (overall) change among occupants of any vehicle type in 2007.¹⁶

Figure 21 shows observed usage in Kansas. There were large and significant gains associated with the 2006 CIOT in each vehicle category. Overall increases in 2007 were

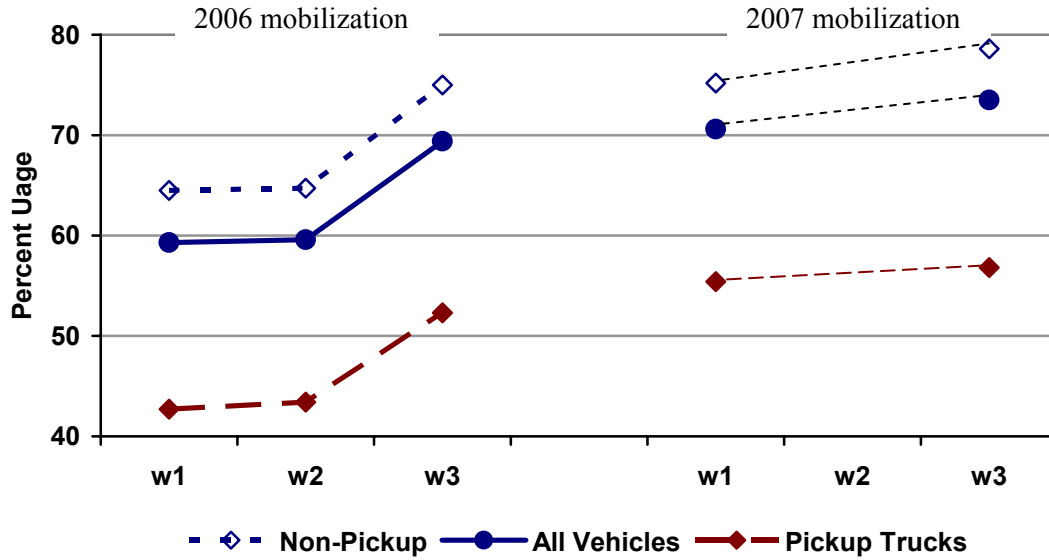
¹⁴ The only exception was Missouri where there was a similar impact in both years. However, in Missouri, seat belt used declined between years and that likely influenced the 2007 increase by providing for a low baseline for the 2007 effort).

¹⁵ In Nebraska, the usage rates for pickup and non-pickup occupants at the post-CIOT measurement period (w3) in 2006 was estimated, based on measured changes in the overall rate and on prior ratios of pickup truck use and overall use at other measurement points. Average changes at each phase that were based on four States (using the Nebraska estimate) were slightly greater than estimates of change based on only three States (excluding Nebraska). For example, excluding Nebraska, there was an average 10-point increase in usage among occupants of pickup trucks (in three States over two years). Including Nebraska and the estimated usage at w3, the average two-year increase was 8 percentage points.

¹⁶ Because there was no intermediate (w2) survey conducted, it is not known if there was any increase or decrease associated with either phase of the 2007 campaign.

more modest and they appeared to be greater in non-pickup vehicles. Because there was no intermediate survey in 2007, the impact associated with each phase is unknown.

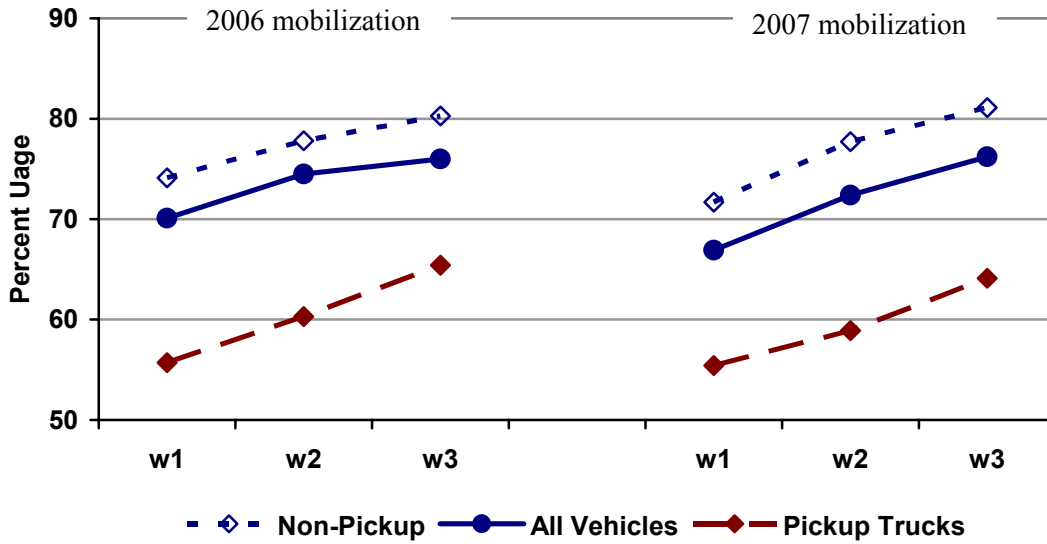
Figure 21. Observed Usage Rates in *Kansas*: Overall and by Vehicle Type



Missouri conducted three waves of surveys in 2006 and 2007. As a result, estimates of impact are available for each phase of the program in both years. Figure 22 shows of the impact associated with each phase of the two-year program (i.e., for BUIYT and CIOT in both 2006 and 2007).¹⁷

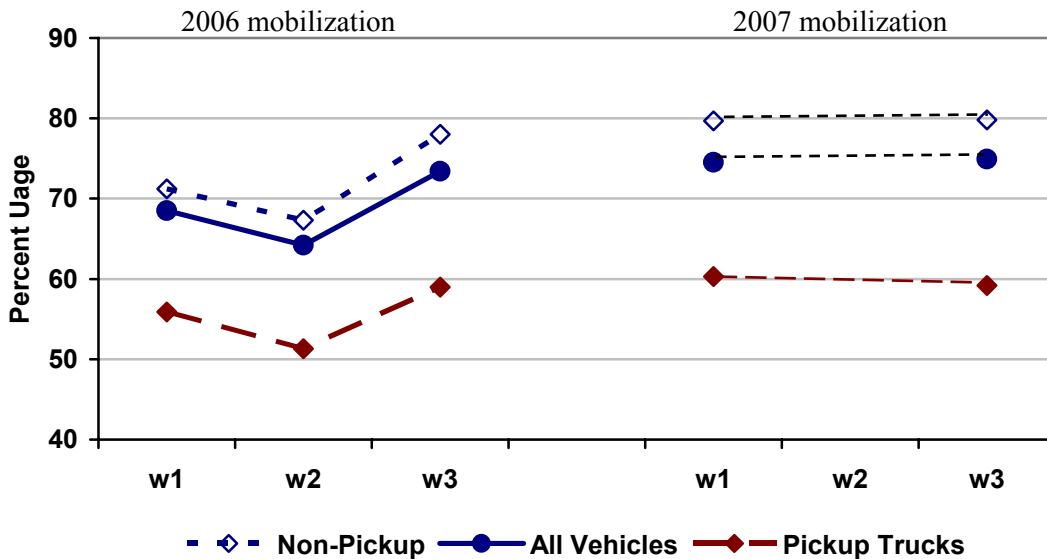
¹⁷ There was a slight difference in the timing of w1 and w2 observations for pickup trucks and other vehicles (the latter of which were conducted slightly later in time). As a result, the estimates of usage among occupants of non-pickups and of all vehicles may be slightly higher than they were at the exact same times that the pickup truck observations were made. If so, the overall gains in usage, overall and for non-pickup vehicles, may have been slightly higher than is shown in this figure (and in Table 23).

Figure 22. Observed Usage Rates in Missouri: Overall and by Vehicle Type



Finally, in Nebraska, there was an initial decline in usage in all vehicle categories, associated with the 2006 BUIYT phase. During CIOT, however, there were large and significant increases in usage among all vehicle types. Within this all-vehicle category, the rates for pickups and non-pickup vehicles had to be estimated after the CIOT phase (at w3) because the data were not disaggregated for that measurement period. Based on the relative levels of usage at all other data points and the known overall rate, however, the rates shown are best estimates. Here again it appears that the 2006 CIOT was the most effective phase of the two-year campaign.

Figure 23. Observed Usage Rates in Nebraska: Overall and by Vehicle Type

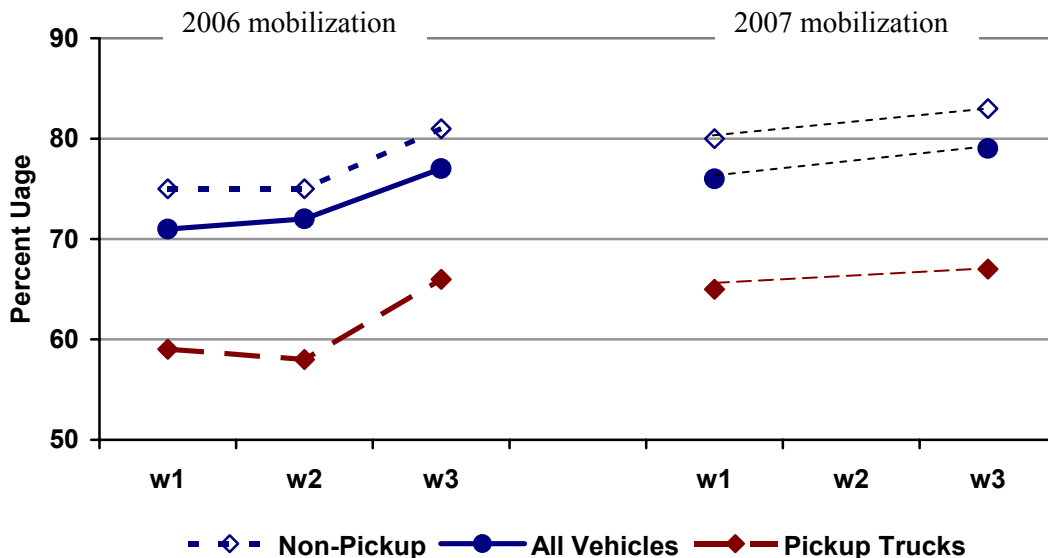


5. Four-State Averages

Figure 24 shows the unweighted average rates and changes for the four States, over the two-year BUIYT/CIOT program. The largest increase was associated with the 2006 CIOT program. In all four States, the increases during this phase were similar among occupants of pickup trucks and occupants of other vehicles. Gains were more modest in 2007 and they resulted primarily from increases in Kansas and Missouri. The timing of the 2007 increase in Kansas is unknown but the impact was relatively uniform across both phases of the program in Missouri (see Figure 22). Seat belt use in Iowa and Nebraska did not change significantly in 2007.

The difference in usage between pickup trucks and other vehicles remained relatively constant over the two-year program period, with usage in pickup trucks averaging 15 to 16 points less than usage than in other vehicles. This gap varied from State to State, ranging from a 9-point difference at baseline in Iowa (declining to 5 points in 2007) to a 22-point difference in Kansas throughout the two-year program.

Figure 24. Average Usage Rates and Changes in the Four States, by Vehicle Type



C. Changes in Usage Among Crash Victims

1. Measuring Change in Usage Among Crash Victims (Impact Evaluation)

Seat belt use among crash fatalities was examined, using NHTSA's Fatality Analysis Reporting System (FARS) data. Table 24 shows the annual percentage of restrained crash victims from 2000 through 2006.¹⁸

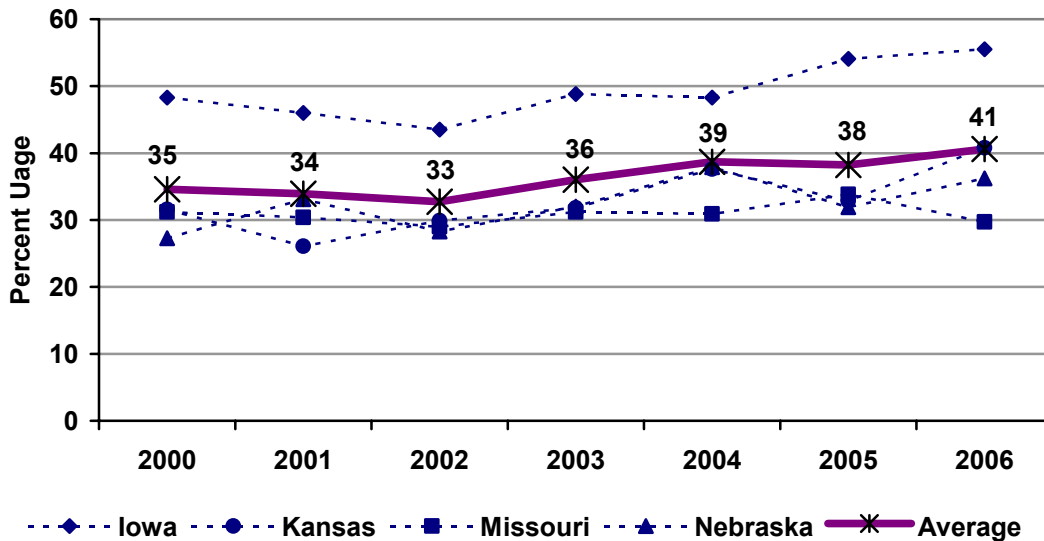
¹⁸ FARS data for 2007 were not yet released at the time this report was written.

Table 24. Percentage Seat Belt Use Among Fatal Crash Victims in the Region 7

	2000	2001	2002	2003	2004	2005	2006
Iowa	48.3	46.0	43.5	48.8	48.3	54.1	55.5
Kansas	31.6	26.1	29.9	31.8	37.6	32.8	40.8
Missouri	31.2	30.4	29.0	31.2	30.9	33.8	29.7
Nebraska	27.3	33.1	28.3	32.0	37.9	31.9	36.2
Average	34.6	33.9	32.7	36.0	38.7	38.2	40.6

Figure 25 shows that there have been gradual increases in usage among crash victims, particularly since 2002 when these States began participating in national CIOT mobilizations. Further, there appears to have been an increase in 2006, the first year of the combined BUIYT/CIOT mobilizations.

Figure 25. Percentage Seat Belt Use Among Fatal Crash Victims in the Central Region



A binary logistic regression analysis was conducted on quarterly FARS data to determine if there might have been a significant increase in usage among crash victims in 2006. No such significant shift was found. However, there was an interaction effect in that there was a significant shift in the belted proportion of occupants of pickup trucks relative to the belted portion of occupants of other vehicles (Wald (1) = 13.32; $p < 0.01$). Thus, there was a slight indication that the first year of the two-year program may have had an effect on usage among crash victims that differed by vehicle type.

V. Summary and Discussion

Seat belt usage is clearly and consistently lower among occupants of pickup trucks than among occupants of other vehicles. Baseline usage rates were 15 to 16 percentage points lower among occupants of pickup trucks than among occupants of other vehicles when this project began in May 2006.

Significant But Not Differential Impact on Observed Usage. Observed usage in pickup trucks and in other passenger vehicles increased by about 8 percentage points from baseline to the conclusion of the second year of effort, but the gap between usage in pickup trucks and in other vehicles changed only in Iowa, where it declined from 9 points to 5 points.

Activity Levels. In terms of activity levels, every State had a “strong” media program that resulted in awareness levels that were comparable to (or greater than) the levels achieved in most benchmark programs. Enforcement was more modest, with two-week citation rates that were generally below two-week benchmark levels in other “strong” CIOT efforts. In Missouri and Nebraska, citation rates were far below benchmark levels.

Consistently Low Levels of Awareness Regarding Pickup-Specific Messages. Two indices that remained very low in spite of strong media efforts were: (1) awareness of *messages to buckle up in pickup trucks*, which remained below 40%, half the rate of awareness of general messages to buckle up; and (2) recognition of the *BUIYT slogan*, which generally did not exceed 20%, one-fourth the rate of CIOT slogan recognition.

Awareness of Special Enforcement Efforts. In spite of relatively low citation rates, however, awareness of *special enforcement efforts* was as high as the levels achieved in other “strong” CIOT programs, such as the 2003 and 2004 national CIOT mobilizations. Still, awareness did not reach the levels achieved in the North Carolina and South Carolina CIOT programs (about 85%) and there were only modest increases in *perceived risk of being ticketed for not buckling up*. Kansas had the greatest gains in perceived risk (and one of the largest impacts on observed seat belt usage) associated with the two mobilizations (+7 points). Nebraska also had a large gain in perceived risk of getting a ticket in 2006 and this gain was associated with a substantial increase in observed usage.

Evidence of Greater Impact Associated With CIOT Than With BUIYT. While there was little difference between 2006 and 2007, with regard to awareness levels, there was generally greater awareness after CIOT than after BUIYT. Two important exceptions were provided by the two pickup-related measures (i.e., awareness of messages to buckle up in pickup trucks and recognition of the BUIYT slogan). Awareness of these messages never reached very high rates but all of the increases that were seen were associated with the BUIYT phase. With regard to observed seat belt use, nearly all increases were associated with the CIOT in 2006, with less evidence of change associated with BUIYT.

In fact, one of the most important findings was the consistent increase in usage associated with the 2006 CIOT effort (average increase of 7 percentage points), compared with the

lack of impact associated with the 2006 BUIYT effort (with no gain in three of four States).¹⁹ It is possible that the combined levels of media and enforcement did not reach critical mass during the BUIYT phase, but did reach a sufficient level to have an impact during CIOT. This is not the first evidence of a more powerful CIOT effort, compared with a preceding targeted effort. In the Great Lakes *Rural Demonstration Program* (RDP), for example the CIOT phase was nearly always associated with greater impact than the RDP (Nichols, Ledingham, & Preusser, 2007). One implication for future targeted programs is that they should be paired with CIOT efforts whenever possible to maximize impact potential.

There is one other possible implication of these results. Based on the fact that awareness of specific targeted-group messages (such as the BUIYT slogan) generally did not increase at all during CIOT, it *could be* that inclusion of these messages during the CIOT phase would result in even greater gains among the targeted group during the CIOT phase of the program. This, of course, raises a *potential* problem associated with regard to multiple messages being used.

Comparison With BUIYT/CIOT Programs in Other Regions. The results from this *Region 7* BUIYT/CIOT effort are similar to those achieved in similar programs conducted in the *Region 6* in *Region 4*. In each case, there were modest but significant increases in observed seat belt usage found among occupants of pickup trucks and among occupants of other vehicles. In all three projects, there was some evidence of greater increases in pickup trucks (relative to other vehicles) but this evidence appears to have been somewhat more consistent in the *Region 6* and *Region 4* demonstrations than in the current (*Region 7*) effort. Analyses of FARS data, however, suggested greater increases in usage among crash victims riding in pickup trucks (compared with victims riding in other vehicles) associated with both the *Region 7* and *Region 6* projects.

With regard to activity levels, all three programs spent a minimum of about 8¢ per capita on paid media (both phases combined), but citation rates were generally lower in the *Region 7* program than in the other two BUIYT/CIOT demonstrations. The *Region 7* effort averaged only 15 citations per 10,000 residents over 3 to 4 weeks of enforcement, which was lower than the two-week rates in most benchmark programs and lower than the rates in the *Region 6* and *Region 4* programs.

In spite of these differences in citation rates, all three projects reached relatively high levels of awareness of *special efforts to enforce* State seat belt laws. The average (post-program) awareness rates ranged from 66% in the *Region 7* to between 70 and 80% in the *Region 6* and *Region 4* BUIYT/CIOT mobilizations. These are generally higher rates than the benchmarks derived from past CIOT programs.

Somewhat Modest Results. Although seat belt use increased in *Region 7*, the gains were modest when compared to earlier benchmark programs such as the *Region 4* CIOT program in 2001 and the Model HVE program efforts implemented in 2002. In these

¹⁹ It is not known if there was a differential impact in the two phases of the 2007 program because intermediate (post-BUIYT) measurements were not conducted in three of the four States.

programs, the median increase in seat belt use associated with a single CIOT mobilization was 7 to 9 percentage points. The smaller increases seen in the Region 7 BUIYT effort are likely associated with the fact that mobilizations have been implemented regularly for at least five years in these States.

Fewer States are reporting increases in statewide belt use associated with annual mobilizations and, where gains are reported, they are generally smaller than they were during the peak impact period in 2003 and 2004 (Tison et al., 2008). The Federal dollars NHTSA spends on paid advertisements has remained relatively stable, but State media spending decreased in 2006 and will likely decrease further since innovative grant funds are no longer available.²⁰ Further, analyses of annual CIOT efforts indicate that, between 2002 and 2005, municipal law enforcement agencies in larger cities (100,000 population or greater) reported fewer seat belt citations than they did in conjunction with earlier mobilizations. State police agencies in States with large populations also reported issuing fewer seat belt citations. It is not known if this drop reflects a drop in traffic enforcement in general or if it is primarily a seat-belt-related enforcement issue. Certainly, with regard to this project, most citation rates were not equivalent to past benchmarks.

One other potential issue here is the fact that nighttime usage continues to be very low nationwide and in the Region 7 States, and it may be that these specially targeted programs are not yet reaching those high-risk motorists who are on the road late at night. A review of 2006 FARS data from the Region 7 States shows that the lowest usage rates among crash victims were very late at night, between 9 p.m. and 3 a.m. During that period, fewer than 15% of crash victims (on average) were buckled compared with about 39% from 3 a.m. to 9 a.m. Generally, nighttime usage rates were lower among occupants of pickup trucks than among occupants of other vehicles.

The key to achieving higher seat belt use lies in reaching low-use occupants who are at the highest risk of being involved in serious crashes. Programs should continue to target those at greatest risk, such as rural motorists, occupants of pickup trucks, young males, and people on the roadways late at night. These initial targeted programs have attempted to do just that and they have met with modest success. Pairing a targeted program with a CIOT mobilization appears to offer more promise than conducting such a program alone. There may be better ways to combine and integrate targeted programs and CIOT efforts. One suggestion is to implement them as an integrated three-week effort, rather than in two distinct phases. This is being considered in some currently implemented demonstration programs. There was room to improve the reach, intensity, and awareness of the pickup-truck-related messaging in the Region 7 *Buckle Up in Your Truck* program.

²⁰ Section 157 Innovative Grants (under TEA-21) were the primary source of funding for paid media (and enforcement) efforts during the period from 2002 through 2006.

VI. References

- Mercer Consulting Group. (2005). *Great Lakes Region Rural Safety Belt Initiative: Program Implementation*. Okemas, MI: Michigan Public Health Institute, for the National Highway Traffic Safety Administration.
- Mercer Consulting Group. (2006a). *Great Lakes Region Rural Safety Belt Initiative: Program Implementation*. Okemas, MI: Michigan Public Health Institute, for the National Highway Traffic Safety Administration.
- Mercer Consulting Group. (2006b). *Central Region Pickup Truck Project: May 2006 Campaign Report*. Okemas, MI: Michigan Public Health Institute. Reference Number N-39001-115-504200, Washington, DC: National Highway Traffic Safety Administration.
- Mercer Consulting Group. (2007). *Central Region Pickup Truck Demonstration Project: Program Implementation*. Okemas, MI: Michigan Public Health Institute. Reference Number N-39001-115-504200, Washington, DC: National Highway Traffic Safety Administration.
- NHTSA. (2008a). *Characteristics of Unrestrained Passenger Vehicle Occupant Fatalities 16 and Older in Motor Vehicle Traffic Crashes by Time of Day*. Traffic Safety Facts Research Note. DOT HS 810 948. Washington, DC: National Highway Traffic Safety Administration.
- NHTSA. (2008b). *Seat Belt Use in 2008 – Overall Results*. Traffic Safety Facts Research Note. DOT HS 811 035. Washington, DC: National Highway Traffic Safety Administration.
- Nichols, J. L., & Ledingham, K. A. (2008). The impact of legislation, enforcement, and sanctions on safety belt use. *NCHRP Report 601*. Washington, DC: National Cooperative Highway Research Program, Transportation Research Board.
- Nichols, J. L., Ledingham, K. A., & Preusser, D. F. (2007). Effectiveness of the May 2005 Rural Demonstration Program and the *Click It or Ticket* Mobilization in the Great Lakes Region: First Year Results. DOT HS 810 753. Washington, DC: National Highway Traffic Safety Administration.
- Nitzburg, M., & Knoblach, R. (2004). Rural Pickup Truck Drivers and Safety Belt Use: Focus Group Report. DOT HS 809 711. Washington, DC: National Highway Traffic Safety Administration.
- Solomon, M. G. (2002). *Evaluation of NHTSA's Region IV Click It or Ticket Campaign*. DOT HS 809-404. Washington, DC: National Highway Traffic Safety Administration.

- Solomon, M. G., & Chaffe, R. H. B. (2005). *Evaluation of the May 2004 Mobilization: Programs to Increase Seat Belt Use*. DTNH22-99-25099. Washington DC: National Highway Traffic Safety Administration.
- Solomon, M. G., Chaudhary, N. K., & Cosgrove, L. A. (2004). *May 2003 Click It or Ticket Safety Belt Mobilization Evaluation*. Washington, DC: National Highway Traffic Safety Administration. March 2004.
- Solomon, M. G., Ulmer R. G., & Preusser, D.F. (2002) *Evaluation of Click It or Ticket Model Programs*. DOT HS 809 498. Washington, DC: National Highway Traffic Safety Administration.
- Solomon, M. G., & Preusser, D. F. (under review). Evaluation of South Carolina's *Click It or Ticket* campaign: Final report. Contract DTNH22-99-25099. Washington, DC: National Highway Traffic Safety Administration.
- Tison, J., Solomon, M., Nichols, J., & Gilbert, S. (under review). Evaluation of the May 2006 *Click It or Ticket* Mobilization to Increase Seat Belt Use; Interim Report. Washington, DC: National Highway Traffic Safety Administration.
- Wells, J. K., Preusser, D. K., & Williams, A. F. (1992). Enforcing alcohol-impaired driving and seat belt use laws, Binghamton, NY. *Journal of Safety Research* 23, 63-71.
- Williams, A. F., Lund, A. K., Preusser, D. F., & Blomberg, R. D. (1987). Results of a seat belt use law enforcement and publicity campaign in Elmira, New York. *Accident Analysis and Prevention*, 19, 243-9.
- Williams, A. F., Reinfurt, D., & Wells, J. K. (1996). Increasing seat belt use in North Carolina. *Journal of Safety Research*, 27, 33-41.

**Appendix A: A Summary of Results from the Region 4 and
Region 6 BUIYT/CIOT Campaigns**

I. BUCKLE UP IN YOUR TRUCK - SOUTH CENTRAL

A. Problem and Overview.

The Region 6 BUIYT/CIOT program included five States, Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. The first BUIYT program was implemented in 2004, two weeks prior to the annual May CIOT mobilization. This region wide effort included a paid media campaign with radio and television ads that focused on the dangers of not wearing a seat belt when driving or riding in a pickup truck and encouraged such occupants to buckle up by stressing the effectiveness of seat belts in rollover crashes. They did not convey an enforcement-related message. The CIOT phase of the mobilization included a second paid media campaign, as well as intensified enforcement efforts. This media campaign did focus on enforcement of seat belt laws.

In 2005, the BUIYT media effort switched to an enforcement-related message it included an enforcement-centered outreach effort. However, as with the first year, actual enforcement occurred only during two weeks of the CIOT phase.

B. Media and Publicity Campaigns

In May 2005, nearly \$1.1 million was spent on BUIYT ads focused on males 18 to 39 years old and on pickup drivers. Immediately after this campaign, nearly \$2.8 million in enforcement-centered ads were aired as part of the CIOT phase of the mobilization. Most of the funds for these ads were spent on television advertising.

In order to show the level and distribution of funding for the BUIYT and CIOT programs, a summary of funding for the May 2006 BUIYT and CIOT media campaigns is presented in Tables A-1 and A-2. The BUIYT media purchase was \$1.3 million, nearly 18% greater than the 2005 purchase (\$1.1 million). The media purchase for the CIOT phase was \$2.9 million, a 4% increase from 2005. As with BUIYT, most of the funds were spent on television.

Table A-1. May 2006 BUIYT and CIOT Media Expenditures

Total Budget	Estimated Dollars BUIYT	Estimated Dollars CIOT
\$4.2 Million	\$ 1.3 million	\$ 2.9 million
12¢ per capita	4¢ per capita	4¢ per capita

Normalizing these expenditures relative to population, approximately 12¢ per resident was spent on BUIYT and CIOT advertisements (combined). The largest portion of these funds (about 6¢ per capita) went toward the placement of television ads. About 3¢ per capita was spent on radio ads and about 2¢ per capita was spent on other media, such as billboards and other types of signage (see Table A-2). The overall level of spending was at least twice the average spending in non-demonstration States or across the Nation.

**Table A-2. May 2006 Media Expenditures (per Capita), by Medium
South Region 7 Versus Non-Demonstration States and Nationwide Averages**

	South Central Region	Non-Demo States (22 States/Territories)	Nationwide Average (44 States/Territories)
Total	12¢	5¢	6¢
Television	6¢	4¢	4¢
Radio	3¢	1¢	2¢
Other/Unknown	2¢	<1¢	<1¢

In addition to paid media, earned media (news) was generated in every State, generally associated with press events, press releases, or outreach activities. Counts of earned media events and stories were provided for the CIOT phase but not for the BUIYT phase. During CIOT, there were more than 70 media events and over 14,500 news stories (TV, radio, and print, combined).

C. Enforcement Activity

No citations for seat belt citations were reported as part of the BUIYT phase in 2006 (as in 2004 or 2005), given that the program plan called for enhanced enforcement only during the CIOT phase of each mobilization. All five States intensified enforcement activity as part of the 2006 CIOT effort. Approximately 904 enforcement agencies participated in this two-week period, about 28% of all relevant agencies in the Region. Table A-3 shows that, as a result of this participation, more than 75,000 tickets for seat belt violations and nearly 8,000 tickets for child passenger safety violations were issued, along with 59,085 tickets for speeding violations.

Table A-3. May 2006 Region 6 Region: Law Enforcement Activity

Type of Enforcement Action	Number of Actions
Seat Belt Citations	75,136
Unrestrained Child Citations	7,835
Speeding Citations	59,085
DWI Arrests	3,129

Normalized by population, this level of enforcement resulted in citation rates ranging from 7 to 34 citations per 10,000 residents. Across the Region, an average of 21 seat belt citations were issued per 10,000 residents, slightly lower than the nationwide average of 24 per 10,000 residents.

Table A-4. Law Enforcement Actions per 10,000 Residents: May 2006 in the South Region 7

	Region 7	Non-Demo States	Nationwide Average
Seat Belt	21	25	24
Speeding	16	10	14
DUI	1	<1	1

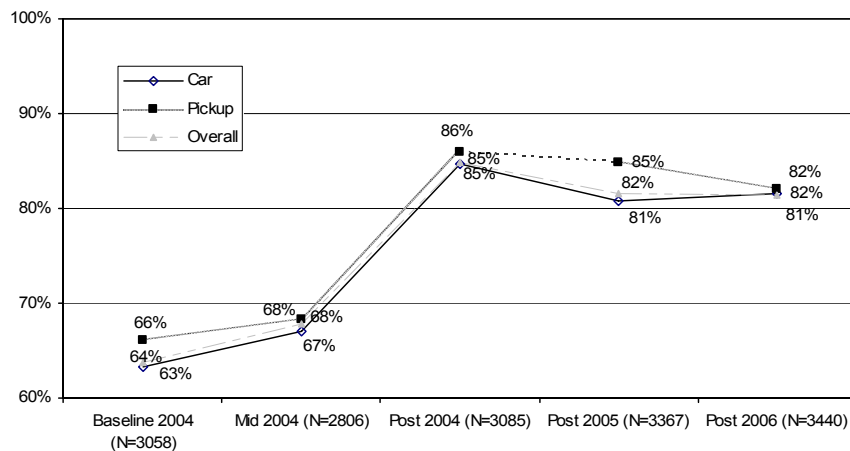
D. Impact on Awareness, Perceptions, and Recognition

Evaluation of the Region 7 BUIYT/CIOT program included surveys of awareness and perceptions regarding seat belt use and the BUIYT/CIOT activities, using motorist surveys. These surveys consisted of one-page questionnaires administered to visitors of driver licensing offices throughout the Region. They measured awareness of the BUIYT and CIOT slogans, self-reported seat belt use, awareness of ongoing police enforcement of seat belt laws, and the perceived likelihood that police would stop them for belt law violations (see example motorist survey form in Appendix B).

Surveys were conducted during five measurement periods spanning the 2004, 2005, and 2006 mobilizations. The first survey was conducted just before the BUIYT phase in 2004 (baseline). The second survey collection wave was conducted toward the end of the BUIYT media campaign (rollover safety message) but before the CIOT (enforcement-related) media began (post-BUIYT). The third survey was conducted just after the CIOT phase of the 2004 mobilization was completed (post-2004). A fourth survey was conducted immediately following the May 2005 BUIYT/CIOT mobilization (post-2005) and a sixth survey was conducted just after the May 2006 mobilization (post-2006).

General Seat Belt Messages. Awareness of general messages to buckle up provided an index of the public’s awareness of messages generated by the two media campaigns (BUIYT and CIOT).

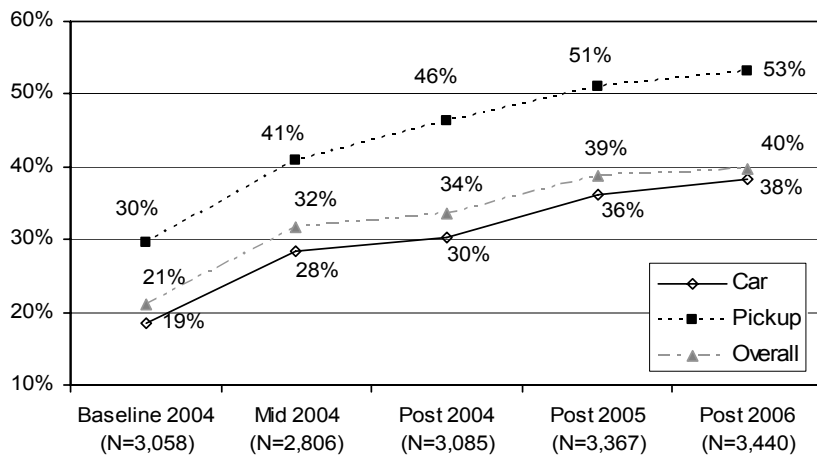
Figure A-1. Awareness of General Seat Belt Messages in the South Central



Even at baseline, about two-thirds of respondents indicated that they had recently saw/read/or heard these *general seat belt messages*. As Figure A-1 shows, awareness of seat belt messages increased only slightly from baseline to the first post-BUIYT period, but then increased to over 85% at post-CIOT (2004). In subsequent years, post-program awareness declined slightly to just over 80%. The decline may have been smaller among those who said that they drove pickup trucks than among those who said that they drove cars (particularly in 2005).

Pickup-Truck-Related Seat Belt Messages. A second index measured awareness of messages to buckle up in pickup trucks, which increased over the course of both phases of the 2004 mobilization, but mostly during the BUIYT phase (see Figure A-2). Post-program awareness continued to increase over subsequent mobilizations, reaching nearly 40% at the post-2006 measurement period. Awareness of these pickup-related seat belt messages was consistently higher among people who identified themselves as drivers of pickups than among drivers of cars (reaching 53% and 38%, respectively, at post-2006). While these levels of awareness of *pickup-specific* messages were higher than at baseline, they were only half the post-program levels associated with *general* seat belt messages.

Figure A-2. Awareness of Recent Messages to Buckle Up in Pickup Trucks

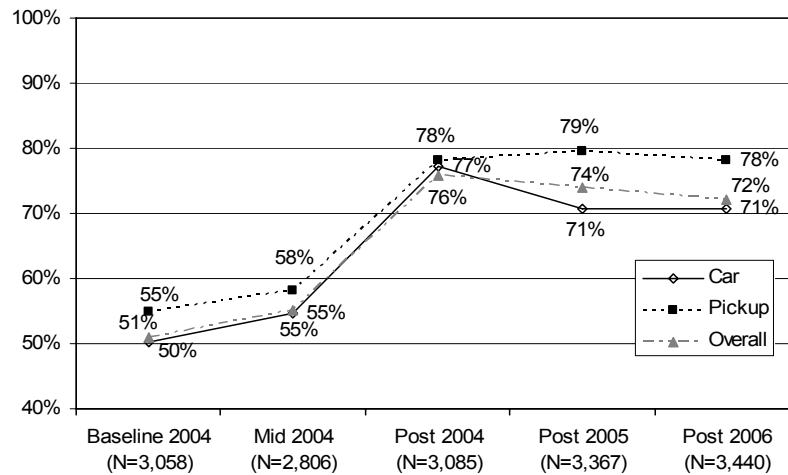


Awareness of Enforcement. The proportion of respondents who indicated that they were aware of *special police efforts to enforce seat belt laws* is shown in Figure A-3. It increased only slightly following the 2004 BUIYT phase, with all-vehicle awareness increasing from 51% to 55% (+4 points). This increase apparently was associated with the BUIYT media effort, even though it did not include an enforcement message, because there was no additional enforcement during this phase. Associated with the 2004 CIOT, however, there was a large and significant increase in enforcement awareness (+22 points, from an all-vehicle rate of 55% to about 77%). Post-program levels of awareness declined slightly in the two subsequent years (to about 74% in 2005 and 72% in 2006). As Figure A-3 shows, awareness of enforcement was generally slightly higher among motorists who said that they drove pickup trucks than among those who said that they

drove cars and there was no decline in awareness among pickup truck drivers in 2005 and 2006. Thus, the combination of media and enforcement (across all three years) appears to have affected pickup truck drivers more than other drivers, with regard to this index.

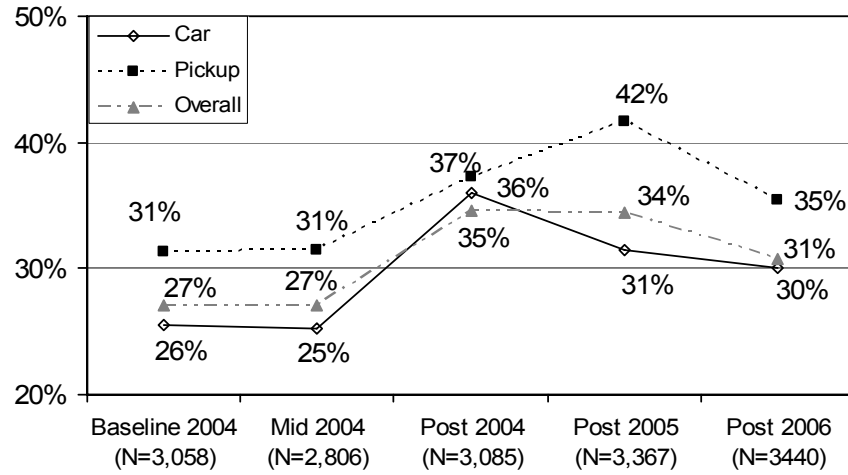
Because there were no surveys conducted between the BUIYT and CIOT phases in 2005 and 2006, it is not known if there were different levels associated with these two phases. Based on other results, however, it is likely that the post-BUIYT levels were significantly lower (and closer to baseline) than the post-CIOT levels shown in Figure A-2.

Figure A-3. Percentage of Awareness of Special Enforcement Efforts



Personal Experience With Seat Belt Enforcement. The proportion of respondents who said that they personally experienced seat belt enforcement also did not change with the 2004 BUIYT media effort but increased significantly with the 2004 CIOT media and enforcement effort. Personal experience among pickup truck drivers increased in 2005, then declined in 2006. The decrease among drivers of cars began earlier (in 2005). remained relatively level among overall occupants but it continued to increase among pickup truck drivers. Overall, reported personal experience decreased significantly ($p < .001$) from post-2005 to post-2006.

Figure A-4. Reported Personal Experiences With Enforcement of Seat Belt Laws



E. Observed Seat Belt Use.

Surveys. Evaluation of the *BUIYT* program included four waves of observational surveys of seat belt use. State evaluation contractors, which included universities and independent evaluation firms, collected and analyzed observational survey data and reported it to PRG. Surveys were conducted before the 2004 *BUIYT* media effort (baseline), after the 2004 *CIOT* phase and after the 2005 and 2006 *BUIYT/CIOT* mobilizations (post-2005 and post-2006, respectively). All baseline surveys were mini-surveys that consisted of sub-samples of sites taken from the State’s full statewide survey. All of the post-program surveys (in 2004, 2005, and 2006) were full statewide surveys that were initiated immediately after the conclusion of *CIOT* phase of each year’s mobilization.

Results. Table A-5 shows usage rates and change for *all vehicles* and for *pickup trucks* at baseline (in 2004) and at post-program (2004, 2005, and 2006).²¹ The median baseline rate was 68% for *all vehicles* and 60% for *pickup trucks*, an 8-point difference (or “gap”) between the two medians.²² As was reported in the 2006 *CIOT* report (Tison et al., 2008), the *median* usage rates at post-program 2006 were 84% for all vehicles and 76% for pickups, still an 8-point gap between the two medians (see Figure A-5).

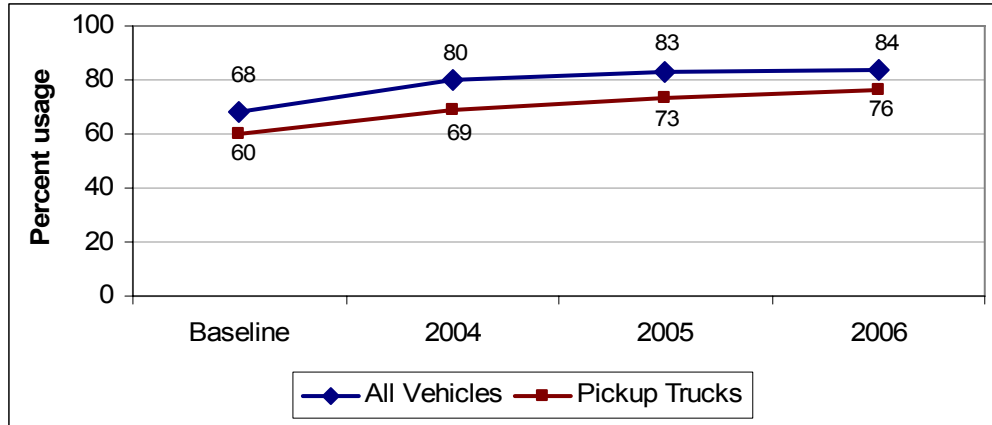
²¹ The “all-vehicle” rates in the table are Section 157 “official” statewide use rates. Use rates for occupants of pickup trucks are derived from the Section 157 statewide survey data, but rates are based on raw counts of observations (not weighted counts).

²² Based on averages, there was a 10-point gap. Thus, the use of medians provides a conservative estimate of the difference in usage between these two categories at baseline.

**Table A-5. Observed Usage in the Region 6 States,
All-Vehicle and Pickup Trucks; 2004 (Baseline) to 2006 (Post-Program)**

State	Vehicle Category	Baseline Use (%)	Post-2004 Use (%)	Post-2005 Use (%)	Post-2006 Use (%)	2004 Chg. (pts)	2005 Chg. (pts)	2006 Chg. (pts)
AR	All Vehicles	60	64	68	69	+4	+8	+9
	Pickup	43	65	58	60	+22	+15	+17
LA	All Vehicles	67	75	78	75	+8	+11	+8
	Pickup	60	69	72	71	+9	+12	+11
NM	All Vehicles	87	90	90	90	+3	+3	+3
	Pickup	76	88	86	85	+12	+10	+9
OK	All Vehicles	68	80	83	84	+12	+15	+16
	Pickup	58	69	73	76	+11	+15	+18
TX	All Vehicles	88	83	90	90	-5	+2	+2
	Pickup	81	79	86	86	-2	+5	+5
Medians	All Vehicles	68	80	83	84	+4	+8	+8
Medians	Pickup	60	69	73	76	+11	+12	+11
Diff.	(PU - All)	-8	-11	-10	-8	+7	+4	+3
Averages	All Vehicles	74	78	82	82	+4	+8	+8
Averages	Pickup	64	74	75	76	+10	+11	+12
Diff.	(PU - All)	-10	-4	-7	-6	+6	+3	+4

Figure A-5. Median Usage in Pickup Trucks and in All Vehicles in the Region 7 Percent Usage at Baseline (2004) and at Post-Program (2004-2006)



Another interpretation is possible, however. A review of trends in each of the States suggests that the gap in usage between pickup trucks and all vehicles may have declined from 2004 (baseline) to 2006 (post-program). Figures A-6 through A-10 show the trends for *pickup trucks* and for *all vehicles* in each of the five States. The gap between these two categories, as estimated by the surveys, declined in each of the States, although only slightly in Louisiana, Oklahoma, and Texas.

Figure A-6. Usage Rates in Pickup Trucks and in All Vehicles in Arkansas, Percent Usage at Baseline (2004) and at Post-Program (2004, 2005, and 2006)

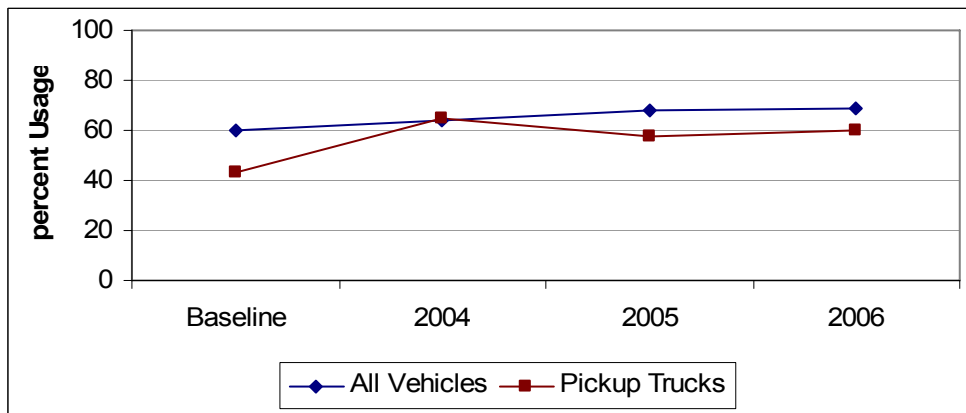


Figure A-7. Usage Rates in Pickup Trucks and in All Vehicles in Louisiana, Percent Usage at Baseline (2004) and at Post-Program (2004, 2005, and 2006)

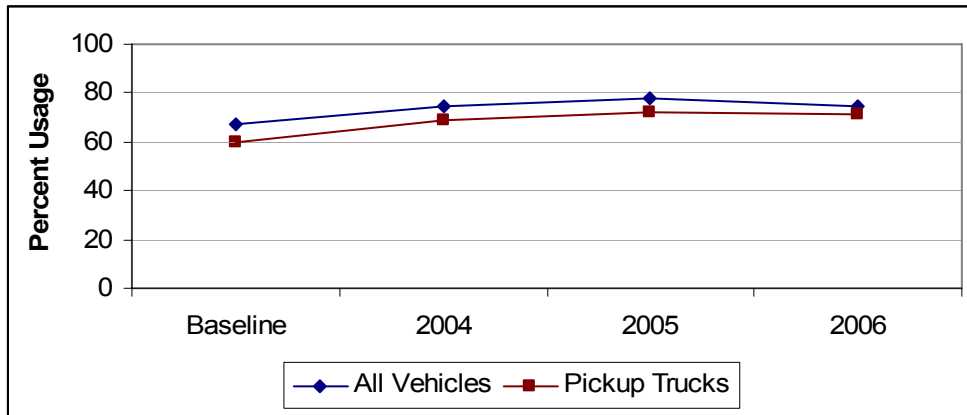


Figure A-8. Usage Rates in Pickup Trucks and in All Vehicles in New Mexico, Percent Usage at Baseline (2004) and at Post-Program (2004, 2005, and 2006)

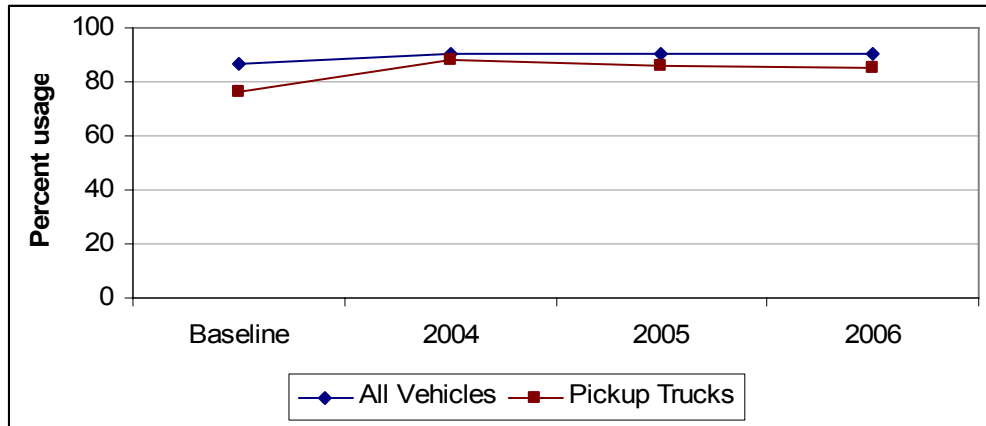


Figure A-9. Usage Rates in Pickup Trucks and in All Vehicles in Oklahoma, Percent Usage at Baseline (2004) and at Post-Program (2004, 2005, and 2006)

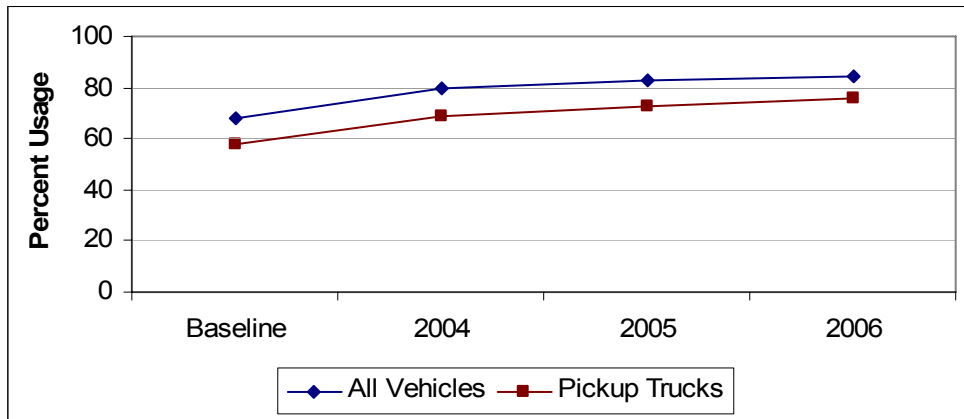
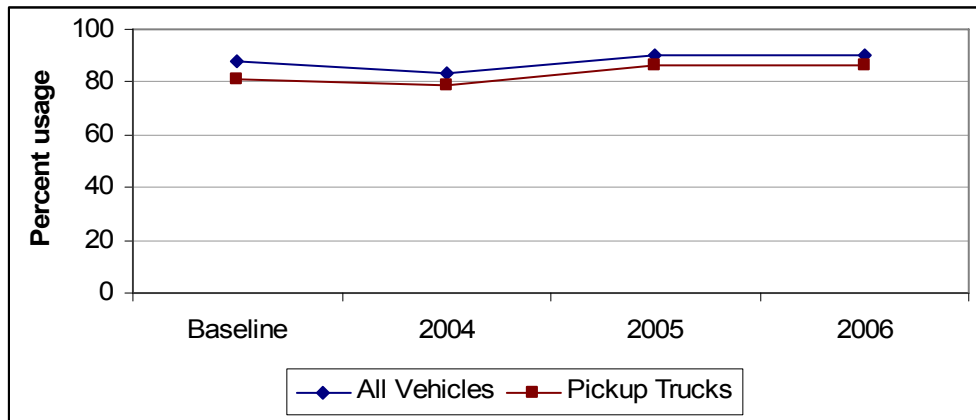


Figure A-10. Usage Rates in Pickup Trucks and in All Vehicles in Texas, Percent Usage at Baseline (2004) and at Post-Program (2004, 2005, and 2006)



Although *medians* are preferred for comparing the results of mini-surveys, it may be that, in this case, *averages* better reflect the relative changes in usage between these two vehicle categories, as shown by the results of the trends in each State. Using the *average* usage in pickup trucks and in all vehicles, the difference (i.e., the “gap”) declined from 10.4 points (at baseline) to 6 points (at post-2006).

F. Usage Among Crash Victims.

The proportion of belted fatalities in May, June, and July 2004, 2005, and 2006 (post-program period) was compared to the proportion of belted fatalities in the corresponding months of 2001, 2002, and 2003 (pre-program period). The results of a chi-square test showed a significant increase in belted fatalities from pre- to post-campaign period. This was true for both trucks as well as passenger cars. However, in the case of pickup trucks, the belted proportion of fatalities increased from 31.6 to 39.9% (+8.3 points), $\chi^2(1) = 13.2$, $p < .0001$. For passenger cars, the belted proportion of fatalities increased from 52.4 to 57.7% (+5.3 points), $\chi^2(1) = 12.5$, $p < .0001$. Results of a binary logistic regression showed a significant interaction between period and vehicle type. The proportion of

buckled victims in pickup trucks increased more than in passenger cars from pre-program to post-program periods Wald (1) = 136.17, $p < .0001$. Thus, while usage increased significantly in both cars and pickup trucks, it increased significantly more in pickup trucks than in cars.

G. Summary of the Results of the South Region 7 BUIYT/CIOT Demonstration

Initially in this BUIYT/CIOT demonstration program, non-enforcement, safety-themed BUIYT media campaign was directed at occupants of pickup trucks prior to the annual CIOT mobilization. The CIOT phase included an enforcement-centered media campaign, along with intensified enforcement. Beginning in 2005, ads aired during the BUIYT phase also focused on enforcement-related messages, although enforcement still was not intensified until the CIOT campaign. This change added two weeks of enforcement-related messages that were reinforced later by actual increases in enforcement.

This combination of media and enforcement resulted in significant increases in awareness of general seat belt messages (i.e., messages to buckle up), messages specific to pickup truck occupants (i.e., messages to buckle up when riding in a pickup truck), and in awareness of special enforcement efforts. Awareness of general messages and of enforcement increased most during the CIOT phase of the program in 2004 and then declined slightly in 2005 and 2006 post-program periods.²³ Awareness of pickup-truck-specific messages continued to increase at post-program over the three years of the program, although they never reached the levels of awareness of general seat belt messages.

Usage increased in every State over the three-year program period, in all vehicles (combined) and in pickup trucks specifically. Gains were small in Texas and New Mexico, two States with very high baseline usage rates in both vehicle categories. Trends in average usage rates among the five States (all vehicles and pickup trucks) did show a slightly greater increase in usage among occupants of pickup trucks than among occupants of all vehicles, thus lowering the gap in usage between these two groups. Analysis of FARS data reinforced this differential gain. Generally, the increase obtained in the first post-program measurement in 2004 was greater than any subsequent year-to-year change. This was the case in every State except Texas, where the greatest gain for both vehicle categories was measured in the second year, 2005.

²³ Based on 2004 measurements and the results of other demonstration programs, it is likely that these general message and enforcement-related awareness levels declined sharply from the post-program period of one year to the pre-program period of the next year, and then increased during the CIOT phase of the subsequent mobilization. With regard to pickup truck specific messages, it is also likely that awareness declined from post-program in one year to pre-program in the next year. However, there is consistent evidence that awareness of these messages increased more during the BUIYT phase than during the CIOT phase of each mobilization.

I. BUCKLE UP IN YOUR TRUCK - SOUTHEAST

A. Problem and Overview.

In 2005, the eight States in NHTSA's Region 4, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee, participated in the Buckle Up in your Truck demonstration program immediately preceding the May 2005 *Click It or Ticket* mobilization. Thus, like other targeted demonstration programs, this was a combined BUIYT/CIOT effort. During the BUIYT phase, each State conducted a two-week television and radio ad campaign to encourage pickup truck drivers to buckle up. Immediately following these two weeks, each State implemented CIOT media and enforcement efforts.

In 2006, the Region 4 States added one week of enforcement to the media component of the BUIYT phase. As in the previous year, this was immediately followed by the CIOT advertising and enforcement phase of the mobilization. Thus, unlike 2005, when there were only two weeks of CIOT enforcement, there was one additional week of BUIYT enforcement in 2006. This extra week occurred concurrent with the first week of the CIOT paid media campaign. Although Georgia participated in the 2005 BUIYT, it did not participate in the 2006 BUIYT phase of the mobilization.

B. Media and Publicity

NHTSA's media contractor, the Tombras Group, developed and produced three versions of a television ad for the BUIYT program. One was an enforcement-centered message, and the other two were safety-oriented messages. Each State's choice of BUIYT ads reflected a perceived level of political and community support for this program. Because Georgia's law exempts seat belt use in pickup trucks, this State did not choose an enforcement-centered BUIYT message in 2005. This is also the reason that the State did not participate in the 2006 BUIYT effort. Kentucky and Mississippi also opted for the safety-related message due to pending legislation that affected the seat belt laws in these two States. Alabama, Florida, North Carolina, South Carolina, and Tennessee used the enforcement-focused versions of the ad. Paid media plans were developed by each State, based on the results of problem identification analyses of pickup-truck-related, occupant fatality data and based on funding availability in each State for paid media efforts.

In 2006, a total of about \$3 million was spent on BUIYT media and \$3.3 million was spent on CIOT media advertisements (See Table A-6) and \$3 million placing BUIYT advertisements. The level of funding for the BUIYT campaign was greater than was spent in 2005 and it was more focused on enforcement. The level of funding spent on the 2006 CIOT media campaign was comparable to the 2005 expenditure.

Table A-6. May 2006 BUIYT and CIOT Media Expenditures

Total Budget	Estimated Dollars BUIYT	Estimated Dollars CIOT
\$6.6 million 11¢ per capita	\$ 3.0 million 6¢ per capita	\$ 3.3 million 5¢ per capita

Normalizing these expenditures relative to population, approximately 11¢ per resident was spent on BUIYT and CIOT advertisements combined. As in the Region 6 Region, the largest portion of these funds, about 8¢ per capita, went toward the placement of television ads. About 2¢ per capita was spent on radio ads and less than 1¢ per capita was spent on other media, such as billboards and other types of signage (see Table A-2). The overall level of spending was at least twice the average spending in non-demonstration States or across the Nation.

**Table A-7. May 2006 Media Expenditures per Capita, by Medium
Region 4 Region Versus Non-Demonstration States and Nationwide Averages**

	Southeast Region	Non-Demo States (22 States/Territories)	Nationwide Average (44 States/Territories)
Total	11¢	5¢	6¢
Television	8¢	4¢	4¢
Radio	2¢	1¢	2¢
Other/Unknown	<1¢	<1¢	<1¢

The 11¢ per resident spent on BUIYT and CIOT advertisements combined was much higher than what was spent on paid media in States that were not involved in NHTSA demonstration programs (5¢) and it was a substantially greater per capita expenditure than in the Nation as a whole (6¢). As with nearly all previous mobilizations and special demonstrations, most of the media funds were used for television ads. The next largest proportion of funds were used for purchasing radio ads.

In addition to paid media, earned news media, generally involving press events, press releases, and news stories, was generated in every State. This earned media effort was facilitated by materials developed and provided by the Tombras Group. During the 2006 BUIYT program, about 22 media events were held and over 600 TV, radio, and print news stories appeared. During the 2006 CIOT phase, there were approximately 666 media events and over 2,700 news stories that appeared on TV, radio, and in print.

B. Enforcement

More than three quarters (77%) of all law enforcement agencies in Region 4 participated in the 2006 mobilization and provided reports on citations issued. These reports indicated that approximately 38,493 seat belt citations were issued during the BUIYT phase and 113,255 citations were issued during the CIOT phase of the mobilization (see Table A-8). The number of citations issued during the CIOT phase constituted a 10% increase over the 2005 CIOT and the total number of citations issued in 2006 (BUIYT and CIOT combined) represented a 47% increase over 2005. At least part of this increase likely resulted from the additional (third) week of enforcement conducted in 2006. Some States issued more speeding tickets than seat belt tickets.

**Table A-8. BUIYT and CIOT Law Enforcement Activity in Region 4
In the 2005 and 2006 BUIYT/CIOT Mobilizations**

Enforcement Action	2005	2006*
Speeding Citations	179,741	298,942
Seat Belt Citations	103,060	151,748
DWI Arrests	11,005	17,846
Unrestrained-Child Citations	6,473	11,558

* Georgia's citations during the 2006 CIOT are included in the 2006 total

During the 2006 BUIYT enforcement period, about 8 seat belt citations were issued per 10,000 residents (Georgia excluded), while 19 seat belt citations per 10,000 residents were issued during the CIOT phase (Georgia included). Combining the BUIYT and CIOT efforts, about 26 seat belt citations were issued per 10,000 residents (Georgia included). As Table A-9 suggests, this citation rate was slightly higher than the nationwide average. It should also be noted, however, that the States in Region 4 issued speeding tickets at a far greater rate during this mobilization than was the case in the rest of the country.

**Table A-9. May 2006 Law Enforcement Actions per 10k Residents*
In the Region 4 BUIYT/CIOT Mobilization**

	SER	Non-Demo States	Nationwide Average
Seat Belt	26	25	24
Speeding	51	10	14
DUI	3	<1	1

* Georgia's citations during the 2006 CIOT are included in the 2006 total

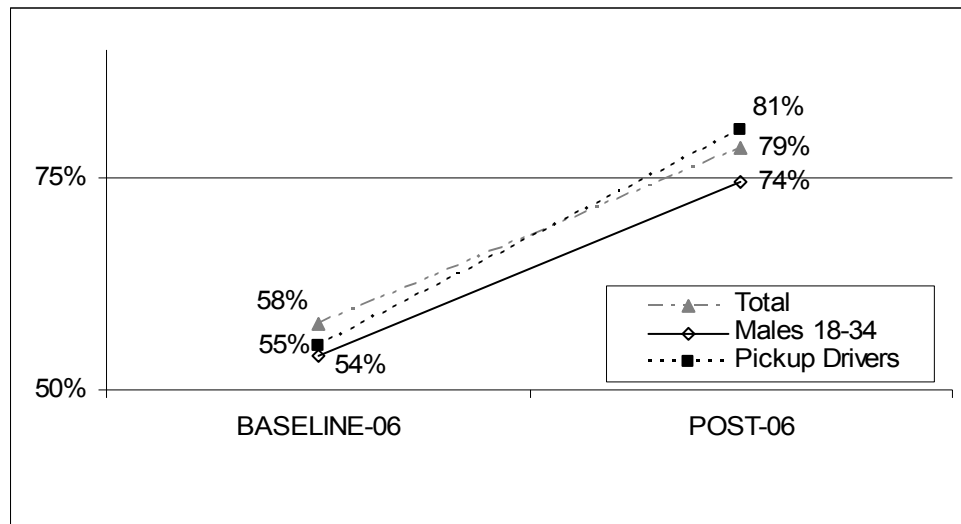
C. Impact on Awareness, Perceptions, and Recognition

Two waves of driver license office surveys were conducted in 2006 as part of the evaluation effort. As in the Region 6 demonstration, these surveys were administered before the BUIYT publicity began and after the CIOT mobilization was completed. Chi-

square tests were used to determine the significance of changes in awareness from baseline to post-campaign.

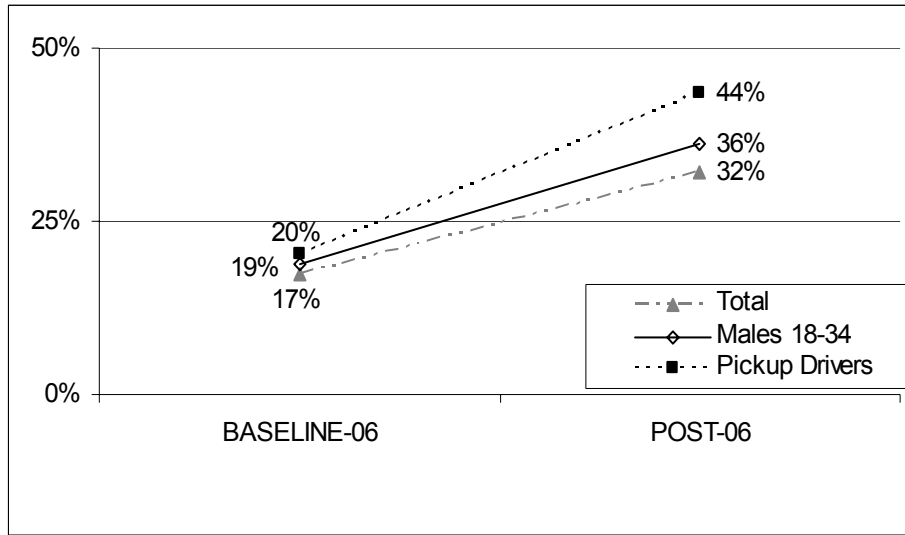
General SB Messages. Awareness of general seat belt messages to buckle up increased over the course of BUIYT and CIOT phases of the 2006 mobilization. By the end of the CIOT phase, three out of four survey respondents indicated that they had seen, read, or heard messages to buckle up. Surveys in all five States, Alabama, Florida, Mississippi, North Carolina, and Tennessee showed an increase in awareness from pre- to post-campaign. Pre-campaign levels of awareness ranged from 44% in Alabama, Florida, and North Carolina to 51% in Mississippi; post-campaign levels ranged from a low of 60% in Alabama to a high of 78% in Mississippi. Pre- to post-campaign increases in awareness ranged from a low of 16 percentage points in Alabama to a high of 28 percentage points in Florida. The increase in awareness among drivers who said that they drove pickup trucks increased by 24 points, from 55% to 81%.

Figure A-11. Awareness of Messages to Buckle Up in Region 4*



*Includes 5 States: AL, FL, MS, NC, and TN.

Figure A-12. Awareness of Messages to Buckle Up in Pickup Trucks*



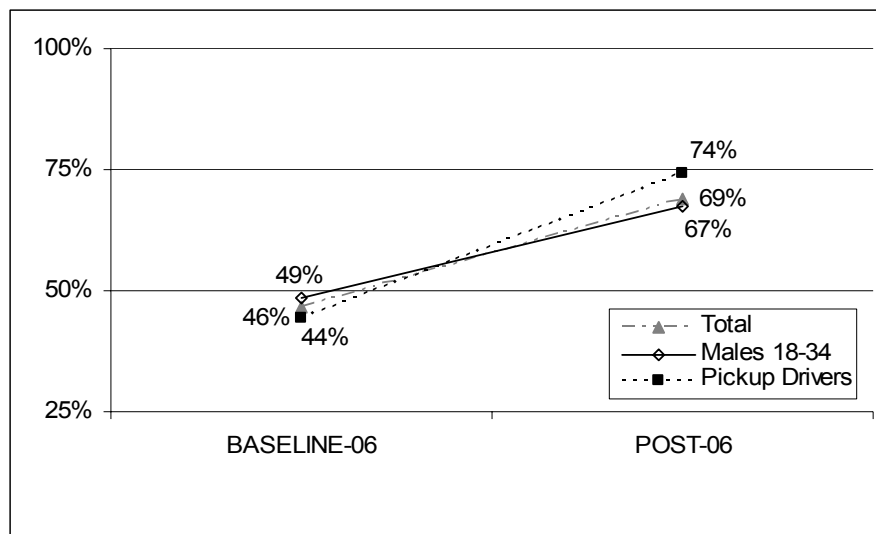
*Includes 5 States: AL, FL, MS, NC, and TN.

Pickup-Truck-Related Messages. Awareness of messages to buckle up when riding in pickup trucks also increased significantly across the BUIYT and CIOT phases. This message also penetrated the intended target groups (young males and drivers of pickup trucks). Pre-campaign levels of awareness ranged from 13% in Alabama and North Carolina to 23% in Tennessee; post-campaign awareness ranged from 21% in North Carolina to 39% in Alabama.

Surveys in all five States surveyed showed an increase from pre- to post-program, ranging from a low of 8 points in North Carolina to a high of 26 points in Alabama. Awareness of this pickup-related seat belt message increased by 24 points from 20% to 44% among respondents who indicated that they were drivers of pickup trucks.

Awareness of Enforcement. As Figure A-13 shows, public awareness of special efforts to enforce seat belt laws increased significantly during the 2006 BUIYT/CIOT mobilization (+23 points among all drivers and +30 points among drivers of pickup trucks). In addition, the proportion of respondents who had personal experience with seat belt enforcement increased significantly from 23% to 28% over the course of BUIYT and CIOT.

Figure A-13. Percentage of Awareness of Special Enforcement Efforts*



*Includes 5 States: AL, FL, MS, NC, and TN.

As indicated, Mississippi used a “soft” (non-enforcement) message during the BUIYT phase of the mobilization and then switched to an enforcement-related message during the CIOT phase. Public awareness of general seat belt messages and of messages to buckle up in pickup trucks increased significantly in the State. Awareness of special enforcement efforts also increased significantly, likely due to the messaging and activity during the CIOT phase of the mobilization.

D. Impact on Observed Seat Belt Use

Before the BUIYT media began, all States conducted observational surveys of seat belt use (baseline). Although some States conducted full statewide surveys just prior to BUIYT, most States conducted mini-surveys that consisted of a sub-sample of sites from their full statewide survey. All States conducted full statewide surveys after completion of the CIOT phase (post-program).

Between June 2004 (post-mobilization) and June 2006 (post-mobilization), there was evidence of increases in seat belt use in all seven States for which complete data were available (see Table A-9). Based on these post-mobilization surveys, there was a median increase of 4.4 points over two years (mean increase of 5.0 points). The second year of the program (2006) was associated with greater impact than the first year (2005). The median (and mean) increase in the first year was less than 1 percentage point, while the median increase in the second year was about 3 points (mean = 4.3 points). Overall, the median two-year increase among these seven States was 4.4 points (mean = 5.0 points). While these appear to be modest increases, it should be remembered that these are post-mobilization-to-post-mobilization increases that do not take into account the inter year decline in usage that typically occurs.

Among these States, four had an existing primary enforcement law, Florida had a secondary law, Mississippi had recently implemented a new primary enforcement law, and Kentucky was about to implement a new primary law. The primary law change in Mississippi very likely influenced its 2006 increase of 12.8 percentage points. It had experienced a slight decline in usage in 2005. Excluding it from the analysis, there was a median 1.3-point increase in 2005 (mean = 1.2 points) and a median 2.3-point increase in 2006 (mean = 2.9 points), for a median two-year increase of 3.7 points (mean = 4.1 points). By any assessment, these were modest increases.

Table A-9. Change in Official Statewide Belt Use Rates June 2004 – June 2006

	June 2004	June 2005	June 2006	Difference 2004-2006	Difference 2005-2006
Primary Law					
Mississippi*	63.2	60.8	73.6	10.4	12.8
Tennessee	72.0	74.4	78.6	6.6	4.2
South Carolina	65.7	69.7	72.5	6.8	2.8
North Carolina	86.1	86.7	88.5	2.4	1.8
Alabama	80.0	81.8	82.9	2.9	1.1
Kentucky*	66.0	66.7	67.2	1.2	0.5
Secondary Law					
Florida	76.3	73.9	80.7	4.4	6.8
Other Law					
Georgia	86.7	81.6	-	-	-

* Kentucky passed primary enforcement seat belt legislation in 2006; Mississippi implemented a new primary enforcement seat belt law in May 2006.

As Table A-10 shows, region wide, the increases in usage among occupants of pickup trucks was greater than the increase among occupants of passenger cars, thus reducing the disparity in seat belt usage between cars and pickup trucks over the course of the program (results based on population-weighted data).

Table A-10. Regionwide Change in Seat Belt Usage

Region 7	2004	2005	2006	Change (2004-06)
Passenger Car*	72.8%	73.4%	77.7%	+4.9
Pickups**	61.7%	64.0%	69.2%	+7.5

(Source: Evaluation Results, Section 157 Belt Surveys 2003-2004-2005-2006, Region 7)

* Weighted statewide use rate; Georgia excluded

** Averages based on raw counts; States weighted 1:1; Georgia excluded

The results from the 2006 BUIYT/CIOT campaign varied greatly across the States. The following table provides individual State use rates from 2006 observational surveys conducted in April (baseline 2006) and June (post-program 2006). All the States that had pre- and post- data showed an increase in belt use in passenger cars. Five of seven States showed an increase in belt use in pickup trucks. Mississippi showed the largest improvement in belt use from pre- to post- with an increase of 10 percentage points for passenger cars and 11.3 percentage points for pickup trucks. In addition to the combined BUIYT/CIOT campaigns, the implementation of a new primary seat belt law in May of 2006 in Mississippi surely played an important role in that increase.

Table A-11. Change in Seat Belt Use Associated With the 2006 BUIYT/CIOT Program Observational Survey Results From April 2006 (baseline) to June 2006 (post program)

	April 2006 Passenger Cars	June 2006 Passenger Cars	Diff.	April 2006 Pickup Trucks	June 2006 Pickup Trucks	Diff.
Primary Law						
Mississippi*	66.3%	76.3%	10.0%	58.9%	70.2%	11.3%
South Carolina	73.6%	75.7%	2.1%	57.5%	63.8%	6.3%
Alabama	82.0%	84.6%	2.6%	71.0%	77.0%	6.0%
Tennessee	80.2%	82.1%	1.9%	65.0%	69.4%	4.4%
Kentucky*	n/a	71.1%	n/a	52.9%	52.6%	-0.3%
North Carolina	90.2%	91.2%	1.0%	81.4%	78.9%	-2.5%
Secondary Law						
Florida	77.8%	84.6%	3.6%	64.4%	72.4%	8.0%

* Kentucky passed primary enforcement seat belt legislation in 2006. Mississippi implemented a new primary enforcement seat belt law in May 2006. Mississippi and Kentucky used a non-enforcement-centered BUIYT advertisement.

E. Impact on Seat Belt Use Among Crash Victims

The proportion of belted fatalities in May, June, and July 2005 and 2006 was compared across message type (enforcement-centered or safety-centered). More specifically, the belted proportion of victims in States using the enforcement-centered message (North Carolina and Tennessee in 2005; Alabama, Florida, North Carolina, South Carolina and Tennessee in 2006) was compared to the proportion belted in the States carrying the safety-centered message (Alabama, Florida, Georgia, Kentucky, Mississippi in 2005; Kentucky and Mississippi). Results of a chi-square test showed a significantly higher proportion of belted fatalities in the group carrying the enforcement-centered messages than in the group carrying the safety-centered message (45.0% and 38.67% respectively, $\chi^2(1) = 14.85, p < .0001$).

Looking at data from pickup trucks and other passenger vehicles separately revealed no difference for pickup trucks, but a significant effect associated with message in other vehicles. The belted proportion of fatalities in pickup trucks was 28.5% in the enforcement message group, compared with 24.9% in the safety message group, $\chi^2(1) =$

1.24, $p > .05$. In other passenger vehicles, the belted proportions of fatalities in the enforcement and safety message groups were 49.1% and 42.8%, respectively, $\chi^2(1) = 11.01$ $p = .001$. The absence of significance in the pickup trucks may have been due to the small number of cases. Overall, the enforcement-centered message was associated with a higher proportion of belted fatalities than the safety-oriented message.

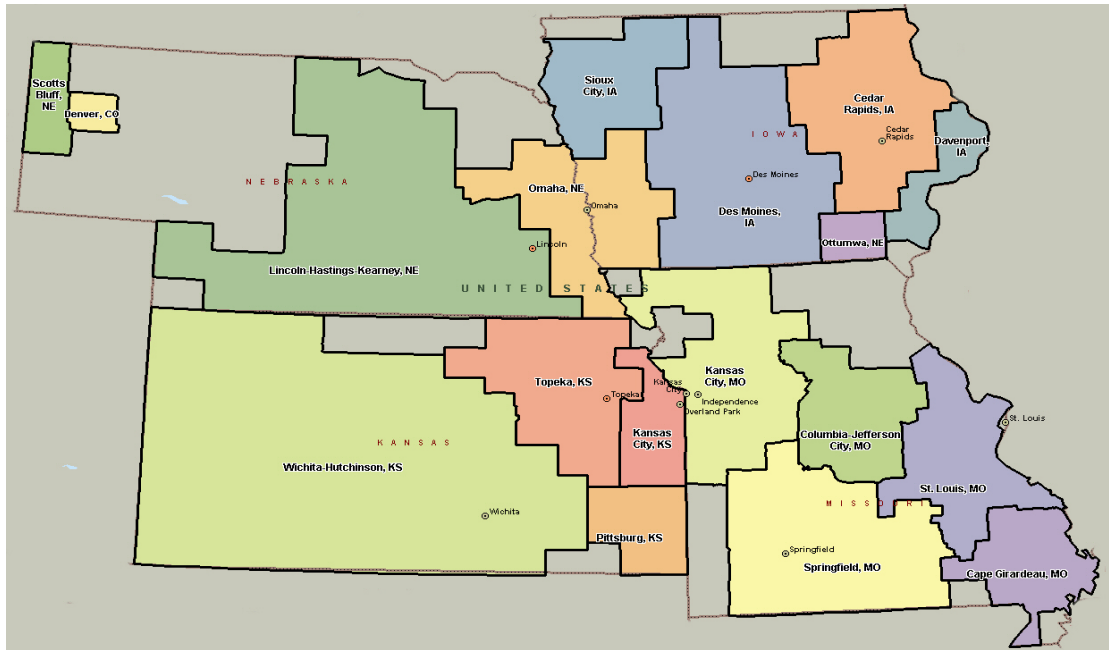
The belted proportion of fatalities in the months of May, June, and July of 2005 and 2006 (post-program period) was compared to the proportion of belted fatalities in the corresponding months of years 2003 and 2004 (pre-program period). Pickup truck occupants showed 26.4% belt use in the pre-period and 26.5% in the post- period (0.1-point increase); passenger car occupants showed 45.1% belt use in the pre- period and 46.3% (1-point increase) in the post-demonstration period. There were no significant differences in the proportion of belted fatalities from pre- to post- period. That is, while there was an increase for both cars and pickup trucks, the measured increase did not reach statistical significance.

F. Summary of the BUIYT/CIOT Effort in Region 4

Awareness of the BUIYT/CIOT campaign was high, especially among the target group and the combined campaign was associated with increased seat belt use in all States. However, there were wide variations in effect in the various States. Mississippi showed a particularly large increase in belt use, presumably due to implementation of a primary law in May 2006. Increases were achieved in both primary and secondary law States.

Appendix B: Map Showing Targeted Markets for 2006 and 2007 BUIYT Paid Media Efforts

Figure B1. Central Region PUT May 2006 and May 2007 Media Buys - Designated Market Areas (DMA) – courtesy of PRG and MCG



Appendix C: Examples of Print Material Made Available for Region 7 BUIYT Demonstration on Project Web Site

Figure C1. English-Language Posters, Billboards, Print Ads




ENGLISH-LANGUAGE POSTERS, BILLBOARDS, PRINT ADS		
Media Item	Preview Online Only	DOWNLOAD FROM BELOW...
Poster "We're finished with warnings." Color (CMYK) JPEG 29.99" x 20.05"		Hi-Res (10.4 MB) 300 dpi
Billboard "We're finished with warnings." Color (CMYK) JPEG 11.29" x 5.18"		Hi-Res (1.5 MB) 300 dpi
Print Ad "We're finished with warnings." Black & White JPEG 7.547" x 10.543"		Hi-Res (672 KB) 300 dpi

Figure C2. Spanish-Language Posters, Billboards

SPANISH-LANGUAGE POSTERS, BILLBOARDS		
Media Item	Preview Online Only	DOWNLOAD FROM BELOW...
Poster (Non-Enforcement) Busca la máxima protección (Make Your Truck Tougher) Color JPEG 32.486" x 19.625"		Hi-Res (8.1 MB) 300 dpi Low-Res (236 KB) 72 dpi
Poster (Enforcement) Atención Conductores de "Pickups" (We're Finished With Warnings) Color JPEG 32.347" x 21.514"		Hi-Res (20.2 MB) 300 dpi Low-Res (368 KB) 72 dpi
Billboard (Non-Enforcement) Busca la máxima protección (Make Your Truck Tougher) Color (JPEG) 11.944" x 5.375"		Hi-Res (1.8 MB) 300 dpi Low-Res (52 KB) 72 dpi
Billboard (Enforcement) Atención Conductores de "Pickups" (We're Finished With Warnings) Color JPEG 11.5" x 5.403"		

Figure C3. English-Language Web Banner Ads







ENGLISH-LANGUAGE WEB BANNER ADS		
<p>Please Note: The animated banner ads below are saved in Macromedia Flash format (.swf) — for use on Web sites. Just click on the linked item you wish to download. If you do not have the free Macromedia Flash browser plug-in, you may download it here for Windows or Macintosh.</p>		
<p>Web Banner Ad Make Your Truck Tougher</p>		<p>160x160a.swf 320x250a.swf 468x060a.swf 728x090a.swf</p>
<p>Web Banner Ad We're Finished With Warnings:</p>		<p>160x160b.swf 320x250b.swf 468x060b.swf 728x090b.swf</p>

Figure C4. English-Language Logos

ENGLISH-LANGUAGE LOGOS		
<p>Please note: The "Buckle Up in Your Truck" EPS files below (in four-color, black & white, and PMS color) are high-resolution and can be scaled to large sizes. These files typically require Quark or Illustrator software to open, making them ideal for distribution to your vendors in the production of banners and/or commercial print. The RGB color JPEG file is low-resolution and best suited for internal uses such as letterhead and flyers.</p>		
<p>Logo "Buckle Up in Your Truck" Color (CMYK) EPS 7.722" x 4.208"</p>		<p>Hi-Res (636 KB) 150 dpi</p>
<p>Logo "Buckle Up in Your Truck" Color (PMS) EPS 7.722" x 4.208"</p>		<p>Hi-Res (640 KB) 150 dpi</p>
<p>Logo "Buckle Up in Your Truck" Black & white EPS 7.722" x 4.208"</p>		<p>Hi-Res (624 KB) 150 dpi</p>
<p>Logo "Buckle Up in Your Truck" RGB Color JPEG 7" x 3.813"</p>		<p>Lo-Res (268 KB) 150 dpi</p>

Appendix D: Region 4 BUIYT/CIOT May 2006 Mobilization Activity and Survey Reporting Schedule

**Table D-1 Region 4 BUIYT/CIOT MAY 2006 MOBILIZATION ACTIVITY
AND SURVEY REPORTING SCHEDULE**

REPORTING PERIOD	TYPE OF SURVEY/REPORT	SURVEY DESCRIPTIONS*	FORMAT	DEADLINE FOR REPORTING	SUBMISSION
April 1 – April 25	Belt Use Observational Survey (w1)	Pre-PUT Statewide mini-surveys	Consult With PRG	July 1	Directly to PRG
April 1 – April 25	Phone Awareness Survey (w1) ONLY if DMV Not Possible	Pre-PUT Statewide N=500	PRG Survey Protocol	July 1	Directly to PRG
April 1 – April 25	DMV Survey (except MO) (w1)	Pre-PUT Survey N= 600-1,000 Completed		July 1	Directly to PRG
April 26 – May 13	PUT Enforcement and Media Activity (w1)	Participating Agencies; Citations; Paid and Earned Media; (incl. GRPs); etc.	CR 2006 PUT Enf. & Media Activity Report Form**	July 10 ***	Directly to PRG
May 10 - 14	Belt Use Observational Survey (w2)	Post-PUT Statewide Mini-surveys	Consult With PRG	July 15	Directly to PRG
May 10 - 14	Phone Awareness Survey (w2) ONLY if DMV Not Possible	Post-PUT N=500	PRG Survey Protocol	July 15	Directly to PRG
May 10 - 14	DMV Survey (except MO) (w2)	Post-PUT Statewide N=600 – 1,000 Completed	Survey Forms	July 15	Directly to PRG
May 14 – June 4	CIOT Enforcement and Media Activity (w3)	Participating Agencies; Citations; Paid and Earned Media; (incl. GRPs); etc.	CR 2006 CIOT Enf. & Media Activity Report Form**	July 10***	Directly to PRG
June 5 – July 10 (start as soon after 6/5 as possible)	Belt Use Observational Survey (w3)	Post-CIOT Statewide Full Survey	Consult With PRG	September 1	Directly to PRG
June 5 – July 10 (start as soon after 6/5 as possible)	Phone Awareness Survey (w3) ONLY if DMV Not Possible	Post-CIOT Survey N=500	PRG Survey Protocol	September 1	Directly to PRG
June 5– July 10 (start as soon after 6/5 as possible)		Post-CIOT Survey N= 600-1,000 Completed	Survey Forms	September 1	Directly to PRG

* **Key: w= Wave. Observational surveys:** Most States conduct two mini-statewide surveys and one full statewide survey (but there are variations). If the State's survey forms do not currently include vehicle type,

the survey form should be revised to capture vehicle type. **Telephone surveys:** only if a DMV survey can't be done; ** PUT/CIOT Enforcement & Media Activity Reporting forms provided by PRG/MCG. *** changed 6 21 06

Submit data to PRG by e-mailing to: [redacted]

Appendix E: Example of a State DMV Motorist Survey Form

Driver License Office Survey

Background for Surveyors to Answer Questions

These surveys will measure awareness, attitudes, and perceptions with regard to these (rural and pickup) program efforts.

We are requesting that a minimum of XX DL Offices be used to collect driver surveys, with a minimum of XXX surveys completed, per office, per survey wave. Clearly, more respondents will be available in some offices and fewer respondents will be available in others. No more than XXX responses per office need be collected.

DL offices should be selected in counties where observational surveys are also being collected.

We are asking that the survey be conducted according to the directions below.

SURVEY DIRECTIONS

Who This survey is for all persons who qualify for a driver license including new drivers, license reinstatements, transfers from other States and license renewals.

How We want to be very careful to minimize disrupting any operations of the DL Office. Thus, we would appreciate it if the DL Office Manager would help determine when and where it would be best to ask drivers to fill out the survey (usually, this occurs while a photo license is being processed).

For more information or answers to your questions, call [redacted], and ask for [redacted] .

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 [State Name] 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 [State Name]?
 Yes No
If yes, where did you see or hear about it? (check all that apply):
 Newspaper Radio TV Billboards Brochure Police Enforcement Other
16. Have you recently read, seen or heard anything about wearing a seat belt and riding in a pickup truck?
 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) *State Name*? (check all that apply):
 Buckle Up [State Name] 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

DOT HS 811 131
June 2009



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

