



MORE COPS. MORE STOPS.

**Evaluation of a Combined Enforcement
Program in Oklahoma and Tennessee**



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



NHTSA

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16. Abstract. The <i>More Cops More Stops</i> (MCMS) high-visibility enforcement program was designed to address multiple traffic safety issues with one message and program effort. Impaired driving, seat belt, and speeding enforcement were conducted and advertised using the MCMS message from November 2011 to August 2013 in five designated market areas (DMAs) in Oklahoma and Tennessee. The total program included six waves of activity in each State. Two waves were standalone MCMS phases, while the other four MCMS phases accompanied <i>Click It or Ticket</i> (CIOT) or <i>Drive Sober or Get Pulled Over</i> (DSOGPO) statewide campaigns. The MCMS phases were associated with increased recognition of the MCMS slogan and in some cases with increases in awareness of general traffic enforcement. There was no overall increase in the perceived risk of a traffic stop. Although the overall program (i.e., MCMS plus statewide campaigns) likely had an impact on seat belt usage, observational surveys provided little evidence that the MCMS phases were associated with additional increases, above and beyond that associated with the statewide campaigns. The strongest evidence of overall program impact was found in Memphis, TN, where there was a statistically significant increase in daytime and nighttime usage that was greater than in the control area. In addition, there was a statistically significant overall program (MCMS plus statewide) decline in the percentage of drivers with positive breath alcohol concentrations (BrAC) on the roadway in Tennessee. While the evaluation did find some positive outcomes associated with the overall program (MCMS plus statewide), the evaluation found no evidence of MCMS being an effective tool for enhancing the effect of the CIOT and DSOGPO statewide campaigns.			
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INTRODUCTION

More Cops More Stops (MCMS) was a high-visibility enforcement (HVE) program implemented to address multiple traffic safety issues with one message. The concept behind the program was to use one overarching program to tackle several issues. In this case, impaired driving, seat belt, and speeding enforcement were conducted and advertised using the MCMS message from November 2011 to August 2013 in Oklahoma and Tennessee. MCMS was intended to either be a standalone program or to be conducted in conjunction with single-issue programs, such as *Click It or Ticket* (CIOT) and *Drive Sober or Get Pulled Over* (DSOGPO), to enhance and expand their impact. MCMS was implemented in two designated market areas (DMAs) in Oklahoma (Oklahoma City and Tulsa) and three DMAs in Tennessee (Memphis, Nashville, and Chattanooga). One additional area in each State was designated as a control or comparison area where no MCMS messaging or enforcement would be implemented. These control areas were Lawton, Oklahoma and Knoxville, Tennessee. Although they were not exposed to MCMS activity, control areas were exposed to media and enforcement associated with the annual statewide programs including CIOT and DSOGPO.

The MCMS component of the program consisted of six phases of enforcement and media that used the *More Cops More Stops* messaging. The first and fourth of these phases (Wave 1 or W1 and Wave 4 or W4), were implemented only in the MCMS program areas, and they were not combined with any other program activity. Each consisted of two weeks of enhanced enforcement and very strong paid media activity.

Four additional MCMS phases (Wave 2 [W2], Wave 3 [W3], Wave 5 [W5]) and Wave 6 [W6]) consisted of seven days of enhanced enforcement and more moderate paid media. Each of these phases either preceded a statewide CIOT (W2 and W5) or DSOGPO (W3 and W6).

METHODS

This program evaluation was designed to measure both the process and outcome of the MCMS program. Program enforcement and media activity data were collected and analyzed to determine how the program was implemented. To understand the effect of the program on established outcome measures, the evaluation also included Department of Motor Vehicle (DMV) surveys conducted by the States, seat belt observations and roadside breath alcohol concentration (BrAC) surveys. The DMV surveys and seat belt observations were conducted in both the program and control areas in order to isolate the effect of MCMS from the effect of the statewide campaigns. BrAC surveys were conducted only in part of the Tennessee program area (i.e., Memphis and Nashville) to measure the effect of the program on positive BrACs among drivers in these locations. BrAC surveys were not originally part of the research design because of the costs associated with this form of data collection, but were later added in

limited locations. Consequently, BrACs were not conducted in the Tennessee control area or in Oklahoma. While speeding was part of the media and enforcement activity, it was not feasible to measure changes in speeding behavior. See Appendix B for the complete data collection schedule.

RESULTS AND DISCUSSION

Program Activity. Reported media and enforcement for MCMS were relatively strong compared to the statewide single-issue campaigns.

Slogan Recognition, Awareness of Enforcement and Perceived Risk of a Traffic Stop. The MCMS activity periods were consistently associated with increased recognition of the MCMS slogan. Increases in awareness of CIOT and DSOGPO were generally associated with the statewide activity periods. Respondents reported greatest awareness for DUI enforcement, followed by seat belt, speed, and nighttime belt. Reported awareness of enforcement was generally higher in the program area than the control area in Tennessee; however, the statewide activity periods (CIOT and DSOGPO) were generally associated with greater increases than MCMS, suggesting the single message campaigns were associated with greater increases in awareness of specific types of enforcement. In Oklahoma, trends were similar in the program and control areas, indicating MCMS may not have increased awareness of specific types of enforcement above and beyond the influence of CIOT and DSOGPO. MCMS activity periods appeared to be associated with increased respondent awareness of general traffic enforcement in Tennessee. Respondents in Oklahoma reported similar awareness of general traffic enforcement in both the program and control areas. There were no overall significant pre-to-post program increases in perceived risk of a ticket or an arrest. There were increases in perceived risk for some enforcement types during some activity periods, but the pattern was inconsistent.

Observed Seat Belt Usage. Although the overall program (i.e., MCMS plus statewide campaigns) appeared to have an impact on observed seat belt usage in all five program DMAs, there was little evidence that the MCMS phases had any additional impact, above and beyond that associated with the statewide campaigns. In every case, there also were significant increases in observed seat belt usage in control areas, which were exposed only to the statewide campaigns (CIOT and DSOGPO).

The strongest evidence of impact of the overall program (i.e., MCMS plus statewide campaigns) was found in Memphis, where there were strong and significant increases in both observed daytime and nighttime seat belt usage. Memphis showed the largest increase in nighttime usage (+13.3 points), which was greater than the increase in the control area (+6.3 points). There was evidence that the Oklahoma program was affected by two tornados that hit the Oklahoma City metropolitan area at the start of W5.

Measured Driver Alcohol Levels. There was a small but statistically significant decline in the percentage of drivers with positive breath alcohol concentrations (BrAC > .00 grams per deciliter, g/dL) in the Nashville and Memphis DMAs combined, providing some evidence of overall program impact (i.e., MCMS plus statewide). These apparent declines were greatest for W4 in Year 2, when the reported use of checkpoints increased. There were no overall significant pre-to-post decreases in measured BrACs greater than or equal to .05 or .08 g/dL. When looking specifically at Nashville, there were significant pre-to-post decreases in measured BrACs greater than or equal to .00 and .08 g/dL. There were no significant declines measured in Memphis individually.

Checkpoints. One of the most positive findings was the substantial increase in checkpoints in Year 2 of the Tennessee program and the positive correlation between checkpoint activity and observed seat belt usage in Memphis. It is possible that the significant increases in observed nighttime seat belt usage in Tennessee and the significant decline in measured positive BrACs among drivers were related to the increase in reported checkpoint operations during Year 2 of the program. A related finding was the positive correlation between nighttime seat belt use and the number of reported checkpoints in Tennessee ($r(8) = .79, p = .007$), suggesting that the checkpoint efforts may have been related to the increase in nighttime seat belt use. This correlation was highest in the Memphis DMA ($r(6) = .86, p = .002$).

Impact on Young Males. There was some evidence that young males reported generally higher recognition of the MCMS and DSOGPO slogans when compared with the general population. This suggests that the targeted media efforts were effective in reaching young males.

CONCLUSIONS

There was no strong evidence that the addition of six phases of MCMS messaging and enforcement added to the impact of ongoing statewide campaigns (CIOT and DSOGPO).

One possible explanation for the results is that the MCMS message was too broad or vague to significantly affect specific driver behavior, even when accompanied by intensified enforcement and followed by specific campaigns. There was a large and significant increase in recognition of the MCMS slogan associated with the first program phase (W1), but recognition never increased substantially beyond that first post-wave measurement, suggesting that it may not have had the same impact on public awareness as slogans such as CIOT have had in the past. Additionally, as found by Jones, Joksch, Lacey, Wiliszowski, and Marchetti (1995), tackling three traffic safety issues (e.g., seat belts, speeding, impaired driving) with the same program is not a practical enforcement strategy because it is taxing on enforcement and is difficult to sustain for the program period. The current study appears to support that conclusion.

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I. BACKGROUND

The More Cops More Stops (MCMS) high-visibility enforcement (HVE) program tested the theory of using one overarching program to address multiple traffic safety issues. Impaired driving, seat belt, and speeding enforcement were conducted and advertised in Oklahoma and Tennessee from November 2011 to August 2013. The purpose of this evaluation was to test the MCMS combined concept using a controlled pre-post design, which allowed for identifying any added benefits of conducting a combined program over those associated with single-issue programs such as *Click It or Ticket* (CIOT) and *Drive Sober or Get Pulled Over* (DSOGPO). This program included six MCMS waves, plus two statewide CIOT and DSOGPO waves. This report summarizes the process and outcome data associated with all program waves, including enforcement and media activity levels; changes in awareness of various campaign slogans and types of enforcement; changes in observed seat belt use (day and night); and changes in breath alcohol concentration (BrAC) levels among drivers (Tennessee only).

MCMS IN OKLAHOMA

The Oklahoma Highway Safety Office (OHSO) worked with NHTSA Headquarters staff, NHTSA's Region VI staff, and NHTSA contractors to organize the MCMS program. NHTSA contractors included the Tombras Group (Tombras), which helped coordinate paid publicity and outreach, and the Preusser Research Group (PRG), which coordinated the program evaluation.

Stepped up enforcement efforts took place in Oklahoma during early evening and nighttime hours (3 p.m. – 3 a.m.). Paid media and outreach spread the general enforcement message, *More Cops More Stops*, across the program area, which included two designated market areas (DMAs), Oklahoma City and Tulsa. Efforts were made to keep the MCMS program message and associated traffic enforcement out of the control area, which was constructed of two counties in the Lawton DMA, Comanche County and Stephens County.

Advertisement Target Group

The Oklahoma program included extensive publicity. Television, radio and Internet advertisements targeted the MCMS messages towards males 18 to 34 and occupants of pickup trucks. The objective was to use MCMS paid media to alert the target audience, as well as the general motoring public, that heightened enforcement efforts were taking place in the area and that the risk of receiving a seat belt and speeding ticket and being arrested for alcohol-impaired driving was increasing.

Advertisement Schedules

The first wave in each program year (W1 and W4) consisted solely of MCMS activity that included 14 days of continuous MCMS paid media. All other waves (W2, W3, W5 and W6) consisted of 7 days of MCMS paid media, followed by a longer period of CIOT or DSOGPO media (15 days and 20 days, respectively). See Appendix B for a listing of Oklahoma paid media dates.

Types of Paid Media

OHSO worked with NHTSA and Tombras to develop a plan to publicize the MCMS program (see Appendix A). Broadcast and cable television advertisements served as the centerpiece of the paid media plan. Broadcast television advertisements can build reach across entire program DMAs. Cable television advertisements can more surgically extend advertisement reach among a target group. Radio advertisements also extended the reach of messaging. The paid advertisements that appeared on television also appeared on Internet websites most popular among males 18 to 34.

Earned Media

OHSO also worked with NHTSA publicity specialists to create and distribute earned media materials to ensure continuity in messaging across earned and paid media strategies. The first wave of the MCMS messaging campaign began with kickoff press events in Oklahoma City, Tulsa, and along the I-44 corridor. Maintenance of earned media continued prior to each of the remaining five MCMS waves to help ensure local messaging continued. The OHSO also used sports partnerships (i.e., University of Oklahoma and Oklahoma State University) to promote the MCMS message during the wave periods. The types of MCMS earned media materials in Oklahoma included but were not limited to:

- Kickoff news event
- Press releases
- Talking points
- Roll call video
- Corporate partnerships

Enforcement Outreach

The OHSO relied on existing law enforcement agency (LEA) partnerships for implementing this MCMS program. The Oklahoma Highway Patrol and existing law enforcement grantees

performed the majority of MCMS enforcement activities and provided enforcement activity data for the program evaluation. Additionally, OHSO Law Enforcement Liaisons (LELs) reached out to non-grantee agencies to gain greater law enforcement agency participation across the program areas. OHSO gave non-grantee agencies the opportunity to participate in a drawing for awards. Two monetary awards were given to the agencies through a random drawing during each wave.

OHSO briefed and trained partnering LEAs on the project and all reporting requirements. Training included enforcement strategy information (e.g., checkpoint legal requirements) and data collection and reporting requirements. OHSO requested the use of saturation patrols and safety checkpoints.

Enforcement Schedules

As seen in Appendix B, the first wave in each program year (W1 and W4) consisted solely of MCMS activity. These waves included 10 days of MCMS enforcement activity, beginning 3 to 4 days after the start of paid media. All other waves (W2, W3, W5, and W6) also consisted of 10 days of MCMS enforcement, initiated 3 to 4 days after the start of paid media, but these waves also included a longer period of CIOT or DSOGPO enforcement. Note that the length of the enforcement activity differed from the length of the media activity.

MCMS Evaluation

The Oklahoma MCMS program included a process and outcome evaluation. The evaluation measured reported enforcement and media activity, public awareness, and observed seat belt use.

MCMS IN TENNESSEE

The Tennessee Governor's Highway Safety Office (GHSO) worked with NHTSA Headquarters staff, NHTSA's Region IV, and NHTSA contractors to organize the MCMS program. As in Oklahoma, NHTSA contractors included the Tombras Group (Tombras) and the Preusser Research Group (PRG).

Paid publicity and outreach spread the *More Cops More Stops* general enforcement message across the program area, which included the Nashville, Memphis and Chattanooga DMAs. The program attempted to keep the MCMS program message and associated traffic enforcement out of the Knoxville DMA (i.e., Knox and Anderson Counties) control area.

Advertisement Target Group

MCMS publicity aired extensively across the Tennessee program areas. Television, radio and Internet advertisements targeted the MCMS messages towards males, ages 18 to 34. GHSO used MCMS paid media to alert the target audience, as well as the general motoring public, that heightened enforcement efforts were taking place and that there was a heightened risk of being stopped for not complying with traffic laws.

Advertisement Schedules

As seen in Appendix B, the pattern of paid media in Tennessee was nearly identical to the pattern in Oklahoma. The first wave in each program year (W1 and W4) consisted solely of MCMS activity that included 14 days of continuous MCMS paid media. All other waves (W2, W3, W5 and W6) consisted of 7 days of MCMS paid media, followed by a longer period of CIOT or DSOGPO media (15 days and 20 days, respectively).

Types of Paid Media

GHSO and Tombras worked to develop a plan to publicize the MCMS program. The types of paid media were similar to what was used for MCMS in Oklahoma. As can be found in Appendix A, the paid media plan used broadcast and cable television advertisements extensively. Radio also extended the reach of the message delivered by broadcast and cable television. The paid advertisements that appeared on television also appeared on a number of Internet websites popular among men ages 18 to 34.

Earned Media

GHSO also worked with Tombras to develop and disseminate earned media materials, including press releases, talking points and fact sheets to ensure consistent earned media messaging throughout all MCMS program waves. The campaign kicked-off with a press event in Nashville that included a large number of LEAs. Earned media plans also included news releases and conferences to inform the public regarding the MCMS campaign efforts. The GHSO also used sports partnerships (e.g., Titan's, Predators, Grizzlies, University of Memphis, Middle Tennessee State University and Vanderbilt University) to further promote the MCMS message during the waves. The types of MCMS earned media materials in Tennessee included but were not limited to:

- Kickoff News Event
- LEL Media Tours
- Press Releases/Press Kits
- Talking Points
- Roll Call Video
- Corporate partnership(s)

Enforcement Outreach

Twenty-two Law Enforcement Network Coordinators (LENC) and four Law Enforcement Liaisons (LEL) promoted the program efforts at local law enforcement meetings and encouraged agency participation. LENCs and LELs provided MCMS banners, information kits, yard signs and bumper stickers.

GHSO and LELs delivered training and information for the MCMS program at Law Enforcement Network Meetings, Chiefs of Police Meetings, Sheriffs' Association Meetings and one-on-one meetings with lead law enforcement officials. GHSO provided overtime and equipment to grantee locations. Non-grantee agencies that participated were eligible to receive awards at

network meetings. GHSO requested enforcement activity including strategies such as saturation patrols and DUI checkpoints.

Enforcement Schedules

As seen in Appendix B, the first wave in each program year (W1 and W4) consisted solely of MCMS activity. These waves included 10 days of continuous MCMS enforcement activity, beginning three to four days after the start of paid media. All other waves (W2, W3, W5, and W6) also consisted 10 days of MCMS enforcement initiated three to four days after the start of paid media, followed by a longer period of CIOT or DSOGPO enforcement (14 days and 18 days, respectively). Note that the length of the enforcement activity differed from the length of the media activity.

MCMS Evaluation

The MCMS program in Tennessee included a process and outcome evaluation. The evaluation measured reported enforcement and media activity, public awareness, observed seat belt use, and roadside breath alcohol concentration (BrAC) of drivers.

II. METHODS

The current research set out to test the MCMS combined concept using a controlled pre-post design, which allowed for identifying any added benefits of conducting a combined program over those associated with single-issue programs.

COLLECTION OF PROGRAM PROCESS DATA

Enforcement Data

PRG worked with each State to develop a protocol for reporting MCMS enforcement data. Both States used the protocol to develop an electronic reporting system to capture information. Data included number and type of agencies participating and reporting, number of enforcement actions reported during the MCMS period, officer hours, number of checkpoints, driving under the influence (DUI) arrests, number of seat belt and child safety seat citations, speeding citations, other warrants, stolen vehicles recovered and additional arrests and violations.

Publicity Data

Tombras documented publicity-related data, which included tracking media data through all phases of the program. Tombras developed and tested media messages, prepared media buy plans, purchased air time, and provided PRG with post-buy analyses. The post-buy reports included dollars spent, ads achieved (by medium) and Gross Rating Points (GRPs) achieved. PRG analyzed the media data on a raw and per-population basis to explain the level of publicity invested in each phase of the program.

Evaluation questions regarding paid media included:

- How many dollars were spent on paid advertisements?
- How many GRPs and airings were purchased and delivered?
- What types of paid media were used (e.g. radio, cable television, network television, Internet)?
- Was the paid media executed as planned?

Participating law enforcement agencies provided the bulk of earned media activity. These agencies coordinated local news events and generated many of the local news stories. Local enforcement agencies reported information on activities to their respective State Highway Safety Office using the electronic databases.

Agencies documented the following regarding earned media activities:

- Number of press conferences
- Number of TV news stories
- Number of radio news stories
- Number of print news stories

DRIVER AWARENESS SURVEYS

This study used State-sponsored Department of Motor Vehicles (DMV) survey data to determine how aware residents became of the phases and campaign(s), and whether community perceptions of enforcement changed with the enforcement waves. As found in Appendix C, the survey form was one-page in length and assessed public awareness of a variety of perceptions and behaviors, including:

- Recognition of various campaign slogans
 - More Cops, More Stops (MCMS)
 - Click It or Ticket (CIOT)
 - Drive Sober or Get Pulled Over (DSOGPO)
- Awareness of enforcement activities
 - General traffic safety
 - Speeding
 - Seat belt (general and at night)
 - Alcohol-impaired driving
- Perceived risk of being stopped and charged with various violations
 - Alcohol-impaired driving
 - Non-use of seat belts
 - Speeding
- Demographic information
 - Age, gender, ethnicity, race and type of vehicle driven most often

The survey data collection schedule varied across waves and between the program and control areas (see Appendix B). To maximize the cost effectiveness of the design, post measurement periods were removed from the MCMS segments of W5 and W6. In addition, the control areas only had pre and post measurements for W1, after which there were only post measurements. The State surveys were conducted for one week during each measurement period. The State's goal was 500 respondents aged 18 years and older in each DMA per measurement period. The State's selection of DMV offices included determining the average volume counts at all DMV locations in the targeted DMAs and then selecting locations in different areas of the DMA (see Appendix C).

Generally, representatives from each participating State administered the paper and pencil surveys as drivers waited at the DMV. The States were equipped with all the materials to carry out the surveying (e.g., forms, collection boxes, signs and postage paid envelopes to mail the completed surveys to PRG's office for data entry). The response rate for the survey was 80 percent. The survey data were entered into databases and checked for accuracy of data entry using a 20 percent keypunch check.

OBSERVATIONAL SURVEYS OF SEAT BELT USE

PRG used observational surveys to measure the seat belt use rate over time in both States' program and comparison (control) areas (see Appendix B for the schedule). PRG conducted observations at day and night.

PRG conducted a total of 16 waves of seat belt observation surveys using 25 sites in each of the program DMAs, and seven such surveys in control locations. Approximately 50,000 to 60,000 drivers and front seat passengers were observed during each survey period in both States combined. Seat belt usage was observed in both program and control areas to isolate the effect of the activity on seat belt use in the program area.

PRG used the same 25 observation sites during daytime hours and nighttime hours. Each observation site was located within a sampled roadway segment, selected randomly from roadway databases provided by each State. PRG observers visited every site before initial observations to ensure the viability of the site for accurate and safe observation. Site selection included consideration of the viability for conducting nighttime observations.

Ideal observation sites included locations at or near intersections where vehicles tended to slow down to increase the time window for observation, which improved data completeness and accuracy. Preference was given to well-lit areas for the nighttime observations, although night vision equipment was used in about one quarter to one third of the selected sites. Selected sites, and all observation procedures at the sites, remained the same for each wave of data collection.

PRG conducted nighttime observations Friday through Monday between the hours of 9 p.m. and 2 a.m. Observers were provided a schedule and maps that specified time of night, night of week, roadway to observe and direction of traffic to observe. Time of night was specified as one of six time periods; beginning at each clock hour from 9 p.m. to 2 a.m., with a 45 minute observation period taking place during each one hour time period.

PRG conducted daytime observations Saturday through Tuesday during daylight hours, between 7 a.m. and 6:15 p.m. Similar to the nighttime observations, observers were provided a schedule and maps. Time of day was specified as one of five time periods, 7 a.m. – 9:15 a.m., 9:15 – 11:30 a.m., 11:30 a.m. – 1:45 p.m., 1:45 – 4 p.m. and 4 – 6:15 p.m., with the 45 minute observation period taking place during each assigned time period.

Daytime observations required only one observer per location, but nighttime required two-person teams, in which case one team member observed while the second transcribed the information verbalized by the first observer. The team used night vision equipment whenever overhead or ambient lighting was insufficient. The near-military grade equipment provided visibility in both dark and less dark conditions. Specifically, the observers used an XR5 "Image Intensifier" tube, manufactured by Delft Electronic Products, mounted in Unitec GS7 night vision goggles. To allow for observations in conditions of total darkness, handheld infrared

spotlights visible only with the use of the night vision goggles and not to the naked eye, further illuminated the roadway.

PRG used quality control methods to train and monitor the performance of the observers. PRG trained all observers according to written procedures, including at least six hours of on-the-street training. On-duty desk sergeants at local enforcement agencies were made aware of survey operations. Observers wore reflective vests and bright yellow hard hats.

PRG collected information on several thousands of occupants per DMA in each survey wave, in order to provide reasonable power for tests of statistical significance. In addition to seat belt use, observers recorded gender, vehicle type, time of day, type of location and occupant seating position (i.e., driver or front seat passenger).

Data collected by the observers were examined for completeness and accuracy prior to any analyses by examining the data for key punch errors and looking for any apparent anomalies in the data.

ROADSIDE BrAC SURVEYS

PRG also collected breath alcohol concentration (BrAC) data at roadside in the Nashville and Memphis DMAs. The BrAC data were collected in conjunction with law enforcement checkpoints.

The Chief Law Enforcement Liaison (LEL) for the State of Tennessee made initial contacts with participating law enforcement agencies. Participation was based on a willingness of the LEAs to provide sobriety trained officers at all the checkpoints (see Appendix E). Exact survey locations were determined by the Memphis and Nashville LELs and PRG. Selections of the exact survey locations depended on a number of factors, such as:

- A steady stream but not an overwhelming flow of traffic
- Ample space for a police checkpoint and room for the BrAC testing operation downstream
- Providing for a representative mix of travelers at night
- Independent of situational traffic flow (e.g., college campus and football stadium)

In each DMA, BrAC surveys first took place in the fall of 2011, prior to the initial MCMS program wave. These baseline surveys established the timing and location for all future surveys.

PRG collected a baseline measure and three post surveys in Year 1 followed by three post surveys in Year 2. Post surveys took place after CIOT and DSOGPO.

As seen in Appendix E, six street locations in the Nashville DMA and six in the Memphis DMA were initially selected for BrAC collection. PRG collected, on average, 600 voluntary BrAC samples, per checkpoint weekend, per DMA. A weekend included Thursday, Friday and Saturday nights. Two checkpoints per night were conducted during each weekend night (in

each DMA). Each checkpoint was approximately two hours long, with a one hour break between them for breakdown and set up.

PRG's objective was to collect 200 BrAC samples per night in each DMA. Night of week, hours of night and location were kept consistent across data collection periods. In a couple of instances, however, weather became a factor. As a result, some scheduled nights and/or locations were cancelled without the possibility of makeup. In spite of these events, samples of no less than 450 drivers were captured in every DMA, during each collection period, to allow for reliable data analyses. All procedures were subject to and met IRB approval.¹

Groups of four or five drivers were randomly sampled from vehicles exiting police checkpoints; they were guided by a PRG traffic controller into an interview bay where PRG survey team members were located. Drivers were then asked to voluntarily submit to an anonymous breath alcohol concentration (BrAC) test "for research purposes only." It was made clear from the outset that all drivers had the right to refuse, and nearly 90 percent of them consented to the test. While remaining in the vehicle, each participating driver blew into an Intoxilyzer 400 Breathalyzer administered by survey personnel. BrAC results never appeared on the device. When the surveyor received indication that a clear reading was obtained, the driver was thanked for participation and shown the way to safely exit the interview bay. Driver and vehicle characteristics were also documented (e.g., vehicle type, gender and approximate age).

Once all tests were collected for the evening, PRG downloaded the BrAC data to a database so that the Intoxilyzer machines could be cleared for the next night of data collection. Once all the data were downloaded for the weekend, test information was matched up with the characteristic data and entered into a database. The proportion of positive BrAC drivers was determined, and pre-to-post differences were estimated per wave.

STATISTICAL METHODS

The primary approach for determining significance of changes was via Chi-square testing. Such tests were employed for comparing changes in awareness, seat belt use and positive BrACs, from one time period to another. Chi-square analyses were used also to compare differences in awareness and seat belt usage between various groups at individual points in time. Binary Logistic Regression analyses were used to test for interaction effects in awareness and seat belt usage for program and comparison groups across time periods. Pearson's Correlation was used to determine relationships between two different sets of data (e.g., program activity and observed seat belt usage). Significance was determined using an alpha = .05 for all tests.

¹ New England Institutional Review Board; Reference Number 11-268

III. OKLAHOMA RESULTS

PROGRAM ACTIVITY LEVELS

Enforcement

Law enforcement agencies in Oklahoma reported on the number of enforcement actions for each MCMS, CIOT and DSOGPO activity period. Both the total number of enforcement actions and Key-3 targeted traffic offences (DUI, seat belt/child seat and speeding) were reported. Total actions included Key-3 written warnings, citations, and arrests, as well as unlicensed driving, suspended or revoked driving, drug violations, stolen vehicles, and fugitives apprehended. The primary measures used to assess enforcement activity in Oklahoma were: number of participating LEAs, total number of enforcement actions, and number of Key-3 enforcement actions. Table 1 displays population-based rates of enforcement activity. As done historically with CIOT evaluations, rates per 10,000 population were calculated for the total law enforcement and Key-3 actions. However, because fewer checkpoints occurred, the rates were calculated using a larger denominator (i.e., per 100,000 population) to enhance interpretation of the index.

Table 1. Numbers and Rates (per 10K or 100K Residents) for Enforcement Indices

Measure	W1	W2	CIOT	W3	DSOGPO	W4	W5	CIOT	W6	DSOGPO
Pop. (m)	2.55	2.55	3.82	2.55	3.82	2.55	2.55	3.82	2.55	3.82
LEAs	69	61	271	39	258	61	53	248	52	224
Actions	9,904	13,437	27,458	9,543	42,009	10,766	16,418	22,928	14,366	33,279
per 10K	39	53	72	38	110	42	65	60	56	86
Key-3	5,257	6,450	15,970	4,032	17,804	4,667	7,773	12,383	4,588	14,532
per 10K	21	25	42	16	47	18	31	32	18	38
Key-3 %	53%	48%	58%	42%	42%	43%	47%	54%	32%	44%
Checkpoints	16	44	108	20	212	19	64	85	11	123
per 100K	0.6	1.7	2.8	0.8	5.6	0.8	2.5	2.2	0.4	3.2

(m) = millions

Actions = Key-3 written warnings, citations, and arrests, as well as unlicensed driving, suspended or revoked driving, drug violations, stolen vehicles, and fugitives apprehended

Key-3 % = % of Total Actions

Note. Different denominators used to calculate rates to enhance interpretability of indices

Number of Participating Agencies. Figure 1 shows the number of participating law enforcement agencies. These numbers include both grantees and non-grantees. Substantially more LEAs participated in statewide campaigns than in MCMS phases. CIOT and DSOGPO campaigns averaged 250 LEAs; MCMS phases averaged 56 LEAs. The number of LEAs participating in statewide campaigns was slightly higher for CIOT than for DSOGPO (averages were 259 and 241, respectively). The number of participating LEAs declined modestly over time, primarily in statewide campaigns, with averages of 265 and 236 in Years 1 and 2, respectively. There was little difference in MCMS phases, with averages of 56 and 55 in Years 1 and 2, respectively). The final MCMS phase in Year 1 (W3) had the fewest participating LEAs (39).

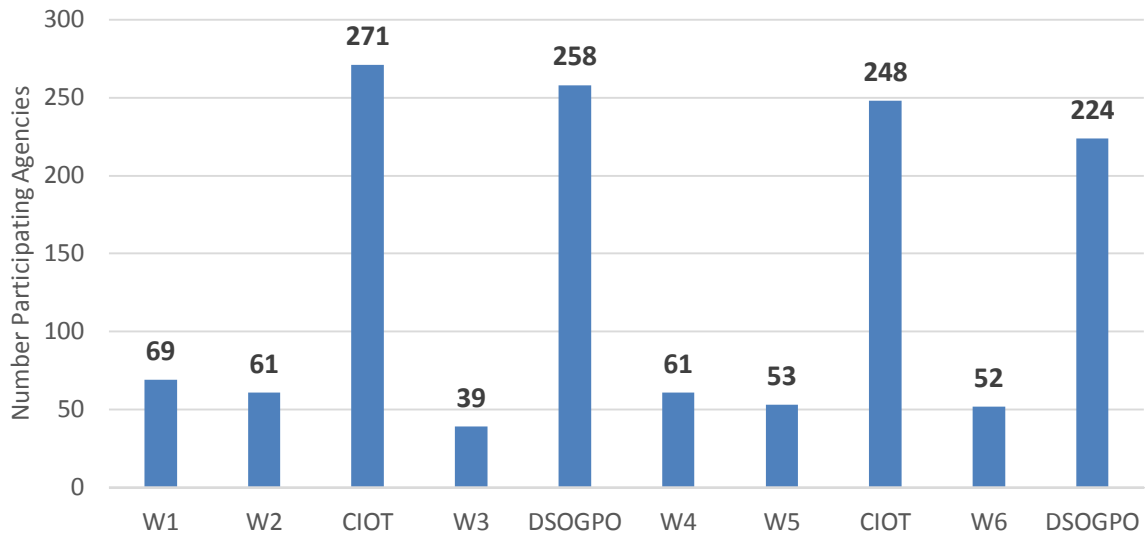


Figure 1. Number of Participating Agencies in Oklahoma

Total LEA Actions. Law enforcement agencies in Oklahoma reported the number of actions for each phase of the program. Total actions included Key-3 written warnings, citations, and arrests, as well as unlicensed driving, suspended or revoked driving, drug violations, stolen vehicles, and fugitives apprehended.

Figures 2 through 4 show the number of total and Key-3 actions. All values shown in these figures are normalized by population size to facilitate comparison across MCMS and statewide phases. Each rate shown is the number of enforcement actions per 10,000 residents.

Generally speaking, the rate of total enforcement actions was higher during the statewide campaigns (CIOT and DSOGPO) than during the MCMS phases (W1 through W6). However, the statewide campaigns were also longer in duration (14-18 days versus 7-10 days for MCMS phases), and they involved more agencies.

Year 2 was associated with higher enforcement rates than Year 1. There was an average of 54 actions (per 10,000 residents) during W4, W5, and W6, compared with an average of 43 across W1, W2, and W3.

Regarding statewide campaigns, DSOGPO in Year 1 had the highest enforcement rate (110), followed by DSOGPO in Year 2 (86). The next highest rates were associated with CIOT in Year 1 (72) and then CIOT in Year 2 (60). One likely explanation for the lower CIOT rate in Year 2 was the severe tornado that struck Oklahoma just days prior to the start of CIOT.

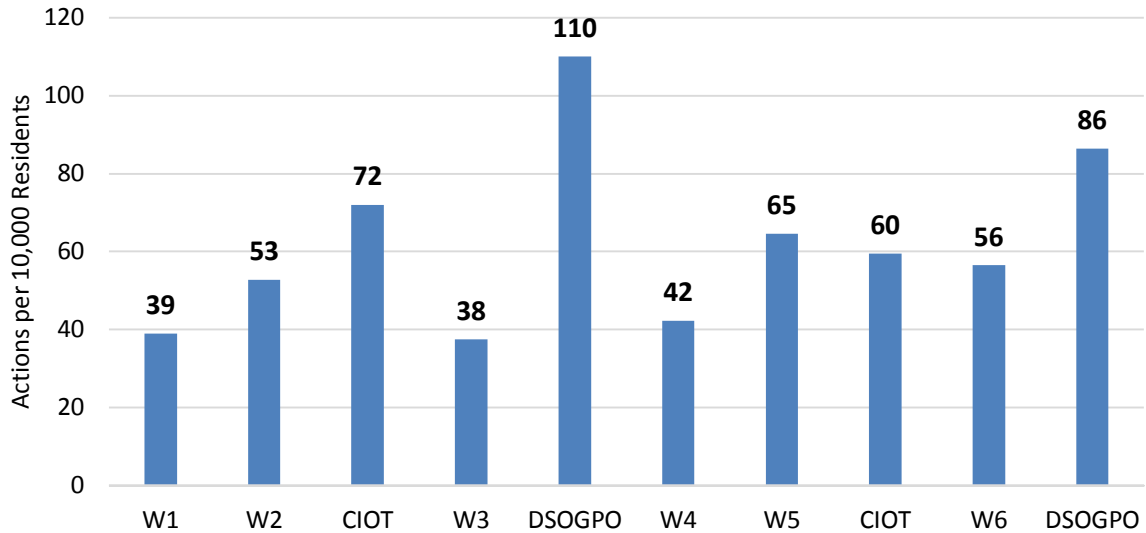


Figure 2. Total Enforcement Actions (per 10,000 Residents) in Oklahoma

Key-3 Enforcement Contacts (as a Percent of Total Actions). Key-3 actions constituted about 46% of all contacts made by Oklahoma LEAs during the MCMS and statewide campaigns (49% in Year 1 and 44% in Year 2). Examination of these data also indicated that the Key-3 percentage of total violations was greater during CIOT and DSOGPO than during MCMS for both Year 1 (50% versus 44%) and Year 2 (49% versus 41%).

Key-3 Contact Rates (Aggregated). Figure 3 shows that the highest Key-3 enforcement rates were associated with DSOGPO and CIOT in Year 1 (i.e., 47 per 10,000 residents during DSOGPO and 42 during CIOT). The next highest rates were associated with DSOGPO and CIOT in Year 2 (i.e., 38 per 10,000 residents during DSOGPO and 32 during CIOT).

Within MCMS phases, there was an average rate of 21 Key-3 actions in Year 1 and 22 in Year 2. The MCMS phase with the highest rate was W5 (31), just prior to CIOT in Year 2. The lowest Key-3 rates were associated with W3 (16) and W6 (18), the last MCMS phases in each year, and with W4, the first MCMS phase in Year 2 (18).

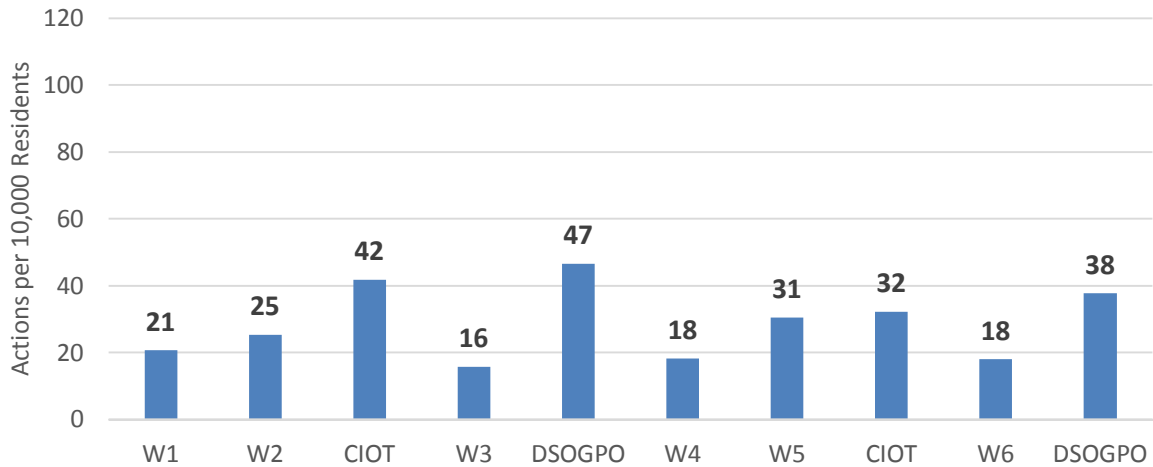


Figure 3. Number of Key-3 Enforcement Actions (per 10,000 Residents) in Oklahoma (aggregated)

Key-3 Enforcement Rates (Disaggregated). Figure 4 shows Key-3 enforcement rates, disaggregated by DUI, OP (i.e., seat belt plus child restraint) and speed. Speed-related contacts generally constituted the most prevalent LEA action (except during CIOT in Year 1). The next highest overall rates were for OP-related actions. The rate of DUI contacts was very low in each phase.

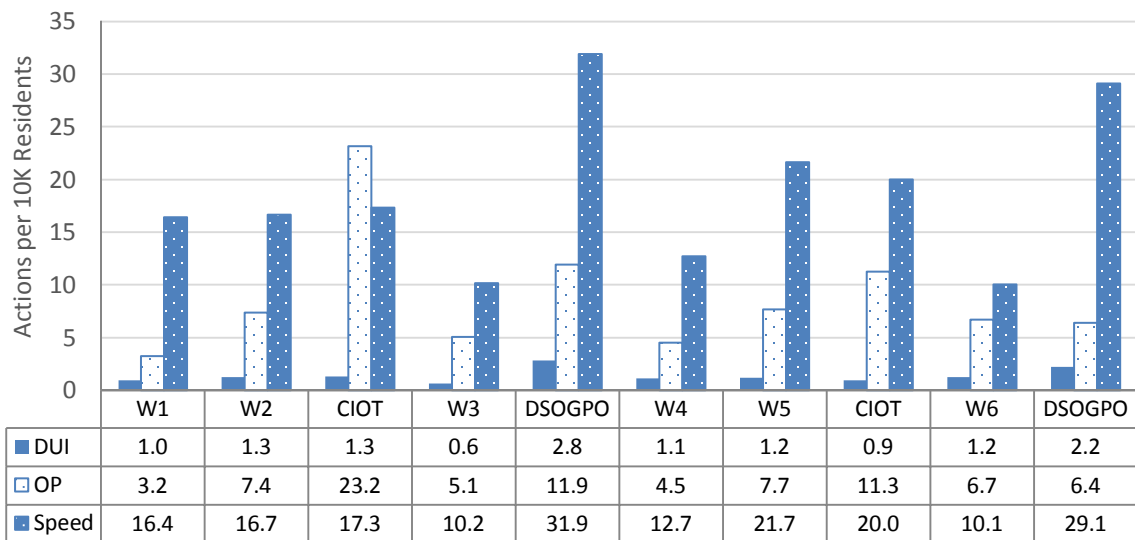


Figure 4. Number of Key-3 Enforcement Actions (per 10,000 Residents) in Oklahoma (disaggregated)

DUI Enforcement Rates. Figure 5 shows DUI enforcement rates. The highest DUI rates were associated with DSOGPO. More modest rates were associated with CIOT. MCMS immediately preceding DSOGPO (W3 and W6) had low-to-modest rates. The average DUI rate during MCMS

phases was about 1.1 arrests per 10,000 residents, compared with 2.5 during DSOGPO. Average DUI rates were similar during Years 1 and 2 (1.7 and 1.8, respectively).

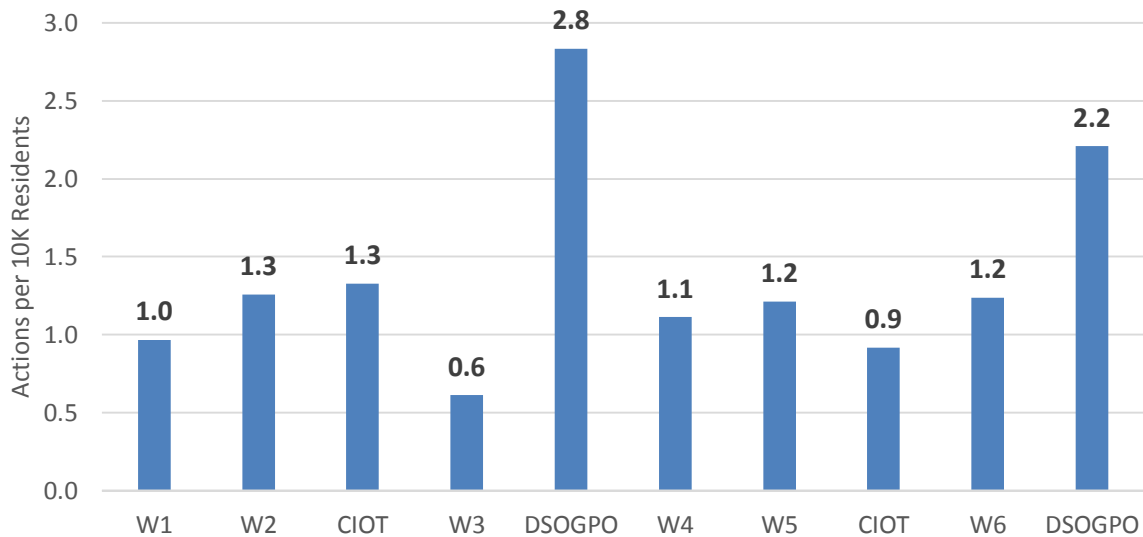


Figure 5. Number of DUI Enforcement Actions (per 10,000 Residents) in Oklahoma

Checkpoints. As seen in Figure 6, reported checkpoint operations included 400 and 302 in Years 1 and 2, respectively. The largest numbers were associated with DSOGPO, followed by CIOT. On average, each MCMS phase was associated with 29 checkpoints, which is an average of 27 in Year 1 and 31 in Year 2. The largest numbers of MCMS-related checkpoints were during W2 and W5, which immediately preceded CIOT. Fewer checkpoints were reported for those phases that preceded DSOGPO (W3 and W6), and fewer were reported for standalone phases (W1 and W4).

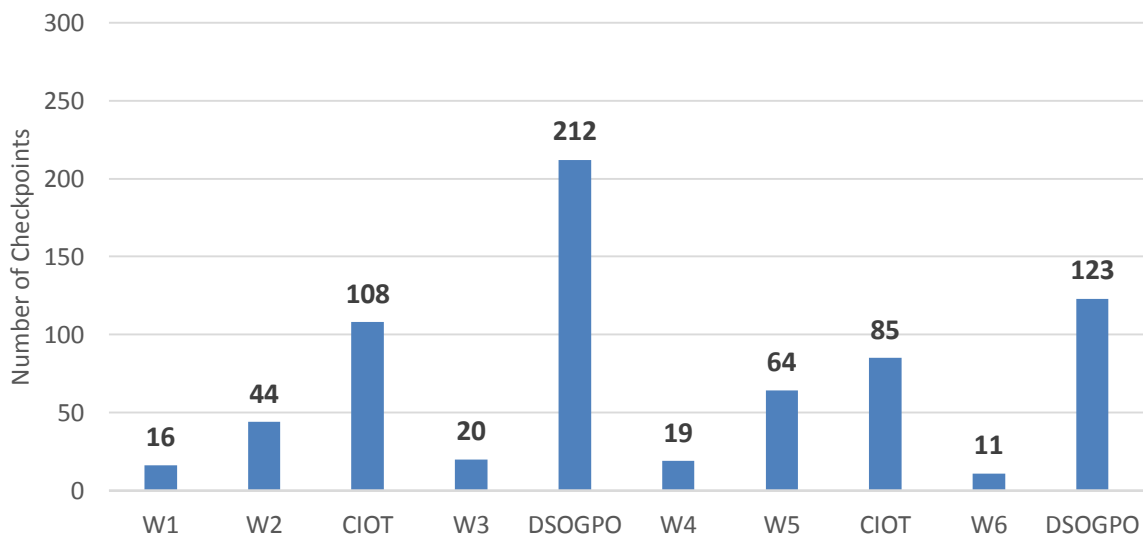


Figure 6. Number of Checkpoint Operations in Oklahoma

Earned Media

State-Reported Results. Numbers and rates for news events and news stories were the primary indices used for estimating earned media activity. In most cases, these numbers were collected and reported by participating LEAs, which were often responsible for conducting the news events that generated the stories. Table 2 shows the numbers and rates of events for each program phase. Media rates were calculated per 100,000 residents to enhance interpretability of the indices. Print articles accounted for the largest proportions of total stories in every phase.

Table 2. Numbers and Rates (per 100K Residents) of News Events and Stories

Measure	W1	W2	CIOT	W3	DSOGPO	W4	W5	CIOT	W6	DSOGPO
# News Events	24	12	24	18	39	8	24	18	11	75
# per 100K	0.94	0.47	0.63	0.71	1.02	0.31	0.94	0.47	0.43	1.96
# TV Stories	16	22	27	26	43	16	21	13	12	21
# per 100K	0.41	0.57	0.42	0.67	0.66	0.31	0.94	0.47	0.43	1.96
# Radio Stories	10	19	64	33	33	12	13	19	8	33
# per 100K	0.26	0.49	0.99	0.85	0.51	0.63	0.83	0.34	0.47	0.55
# Print Stories	39	45	92	71	153	86	51	59	36	75
# per 100K	1.01	1.16	1.42	1.84	2.37	0.47	0.51	0.50	0.31	0.86
Total News Stories	65	86	183	130	229	114	85	91	56	129
# per 100K	2.6	3.4	4.8	5.1	6.0	4.5	3.3	2.4	2.2	3.4

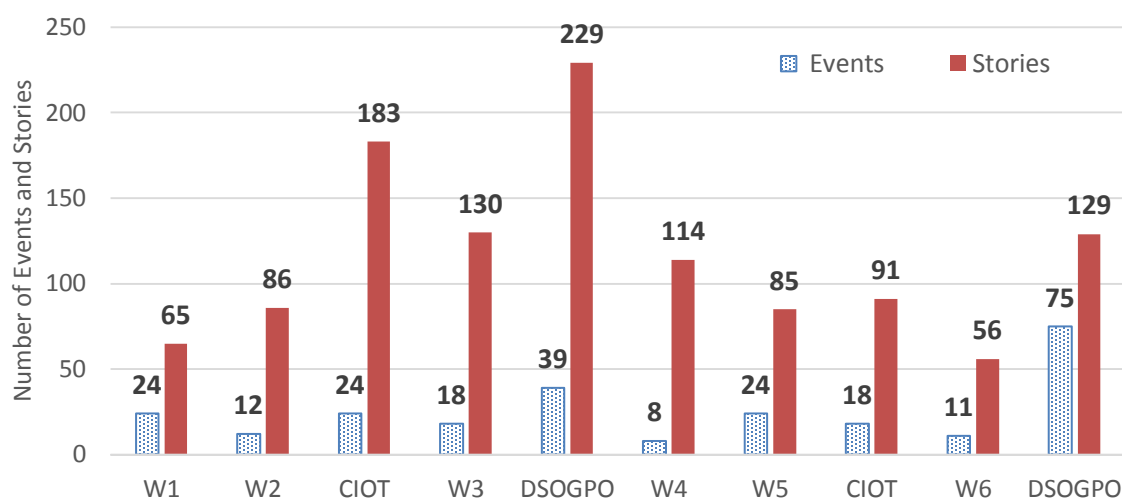


Figure 7. Number of News Events and Stories in Oklahoma

As seen in Figure 7, there were slightly fewer news events in Year 1 than in Year 2 (117 and 136, respectively), but there were more stories reported in Year 1 than in Year 2 (693 and 475, respectively). In Year 1, DSOGPO was associated with the most events (39) and the most stories (229); CIOT had the next highest (24 events and 183 stories). MCMS phases were associated with averages of 18 events and 94 stories. In Year 2, DSOGPO was again associated with the

most events (75) and the most stories (129); W4 had the second highest number (and highest rate) of stories (4.5 per 100,000). The number of MCMS news stories increased through Year 1, from 65 (W1) to 130 (W3), but then it declined throughout Year 2 to 114 (W4), then 85 (W5) and 56 (W6).

Custom Scoop. A media monitoring effort was conducted for several MCMS phases. The monitoring of W1 took place after the fact and thus had less specificity with regard to numbers and trends. However, the W2 report provided useful information regarding the types of stories being aired and their timing.

Custom Scoop found 500 traffic safety-related stories associated with W2 in Oklahoma, of which 130 were related to issues addressed in the MCMS program: 26 of these stories specifically mentioned the MCMS program; 55 dealt with seat belts, 34 drunk driving, 6 child passenger safety and 3 speed. Most (370 of 500 or 74%) of the total number of stories addressed "other" issues.

Stories that mentioned MCMS peaked about one day after the start of enforcement and about three days after the start of paid media; the number of such stories then declined to one or two per day for about two weeks. Daily newspapers accounted for 50% of these stories; television accounted for 15%. None were found on radio.

There was considerable overlap in the Custom Scoop results and those reported by the State. Custom Scoop reinforced the prominence of print media as the most frequent source. In addition, it helped identify when the stories occurred during the MCMS phase (i.e., very early in the phase and then trailing off rapidly over time). The Custom Scoop data also pointed out the small percentage (26%) of total traffic safety-related stories accounted for by MCMS topics.

Paid Media

The objective of the communications program was to get licensed drivers (primarily young males, ages 18 to 34) to believe that heightened traffic enforcement was taking place and that their risk of being stopped and ticketed or arrested for a traffic violation was elevated. The behaviors most focused on were driving after drinking, riding without a seat belt and speeding.

Television and radio ads, as well as online and print materials (e.g., posters) were the primary media developed and aired. As seen in Appendix A, a 30-second television advertisement, entitled "Bubbles," was developed to convey the perception that law enforcement notice people that are speeding, driving after drinking and not wearing a seat belt. These ads were aired in both program DMAs (Oklahoma City and Tulsa) over all 6 MCMS phases.

The stated goals were to achieve "strong" levels of media (reach and frequency) in each of the two-week MCMS phases (W1 and W4); and somewhat more "moderate" levels in each of the one-week phases (W2, W3, W5, and W6).

The strength of the paid media effort in Oklahoma was assessed through funding, number of ads reported and GRPs achieved. Internet activity was measured in the form of impressions, when available. Table 3 shows the values for all three indices (and their population-based rates) by program phase.

Table 3. Numbers and Rates (per 100K Residents) for Paid Media Indices

Measure	W1	W2	CIOT	W3	DSOGPO	W4	W5	CIOT	W6	DSOGPO
Pop. (m)	2.53	2.53	3.82	2.53	3.82	2.55	2.55	3.82	2.55	3.82
\$ Spent	\$183K	\$87K	\$74K	\$87K	\$207K	182K	\$79K	\$74K	\$82K	\$232K
\$ per Capita	\$0.07	\$0.03	\$0.02	\$0.03	\$0.05	\$0.07	\$0.03	\$0.02	\$0.03	\$0.06
# Ads	1,870	891	1,256	1,133	1,997	1,601	1,064	1,402	1,205	4,321
per 100K	74	35	33	45	52	63	42	36	47	112
GRPs ¹	1,018	451	n/a	400	n/a	838	444	n/a	427	n/a

¹ GRPs are as reported by Tombras

Media Expenditures. Figure 8 shows per capita media expenditures. The media flights for W1 and W4 were 14 days in duration and both were standalone phases (i.e., not coupled with CIOT or DSOGPO). All other MCMS phases involved 7 days of advertising, with 4 days in the first week and 3 days in the second week. Each of these phases preceded CIOT (W2 and W5) or DSOGPO (W3 and W6).

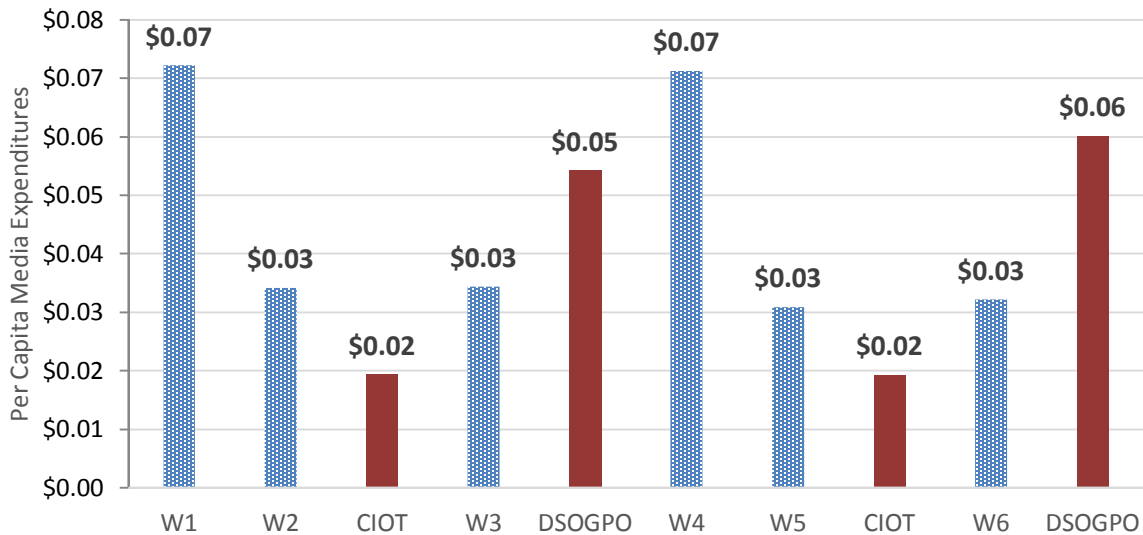


Figure 8. Per Capita Media Expenditures in Oklahoma

National expenditures for CIOT and DSOGPO are not included in Figure 8. There was about \$8 million in nationwide funding for each of these campaigns in each year. Both campaigns emphasized enforcement and single-focus messages (i.e., seat belt non-use or impaired driving) without any mention the MCMS campaign.

MCMS-message funding was allocated primarily to television (nearly 80%) with most of the remainder going to radio. About \$5,000 was spent on Internet advertising during each MCMS phase. Statewide media funding for CIOT and DSOGPO campaigns was allocated more evenly across television, radio and “other” media.

Ads Achieved. Figure 9 illustrates the distribution of ads achieved during each program phase. Again, these are population-based rates with each value representing the number of ads achieved per 100,000 residents. Residents exposed to the MCMS ads were primarily in the MCMS program areas; those exposed to CIOT and DSOGPO ads were distributed statewide, including both program and control areas.

W1 and W4 produced the greatest numbers of ads among the MCMS phases, and DSOGPO produced more ads than CIOT. The large number of ads shown for the final DSOGPO appears to be an outlier, with 112 ads per 100,000 residents reported.

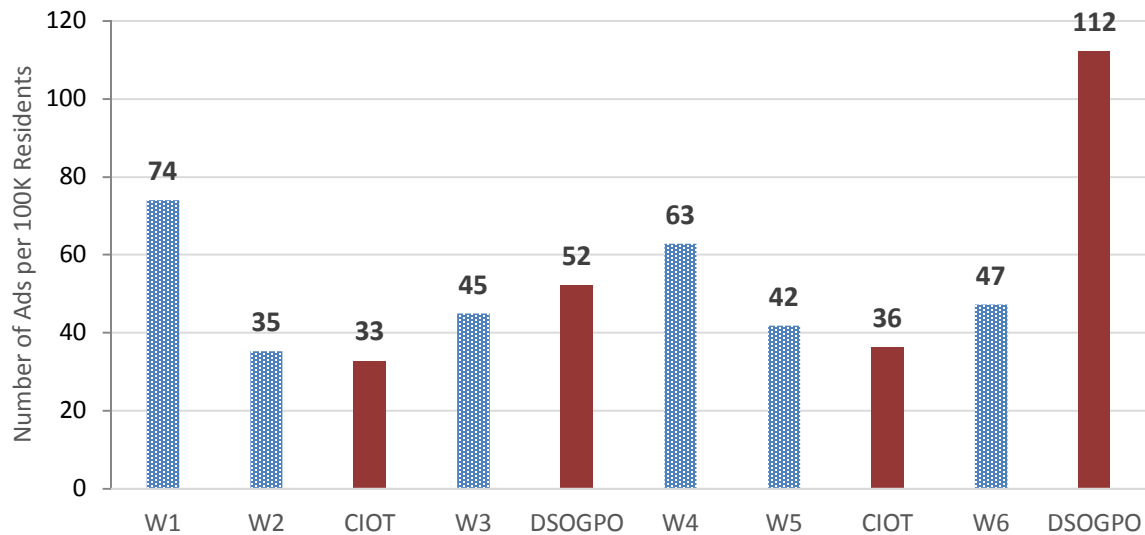


Figure 9. Number of Ads Reported (per 100,000 Residents) in Oklahoma

Gross Rating Points. The third index of media activity is GRPs, a measure of the reach and frequency of television and radio ads in the program area. GRPs were reported for MCMS, but they were not available for CIOT and DSOGPO. W1 and W4 had the highest ratings; all other MCMS phases were about half that amount.

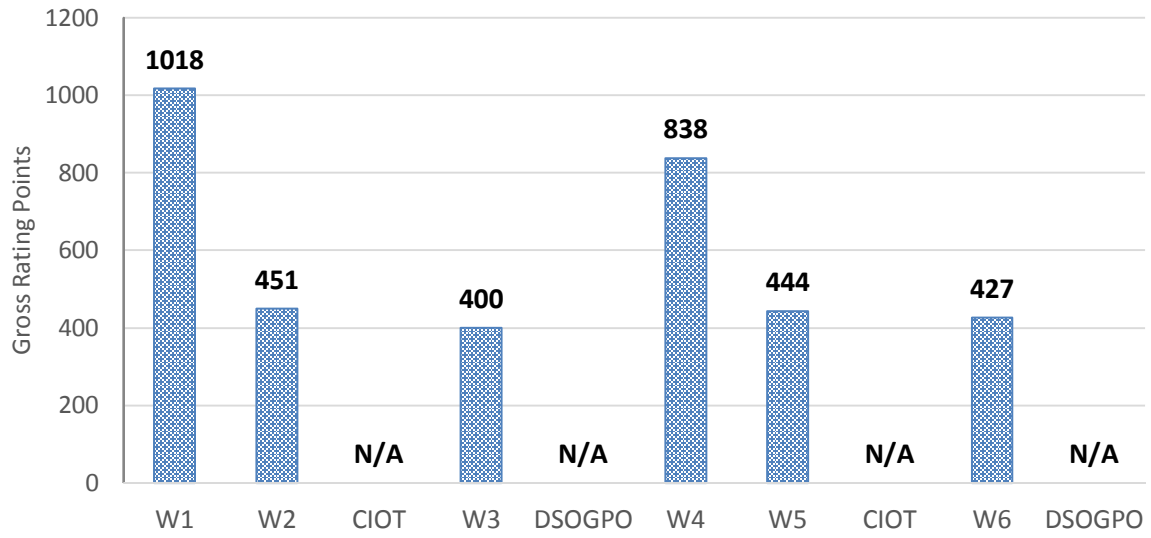


Figure 10. Number of Gross Rating Points in Oklahoma

AWARENESS

Recognition of Various Campaign Slogans. Figure 11 shows the percent recognition for the three major slogans used during this two-year campaign: *More Cops More Stops* (MCMS); *Drive Sober or Get Pulled Over* (DSOGPO); and *Click It or Ticket* (CIOT). The CIOT slogan had the highest recognition levels. DSOGPO had moderate levels of recognition, but increased for both DSOGPO phases. MCMS had the lowest recognition levels. The largest increases in MCMS recognition were associated with W1 and W4, which had the strongest paid media programs.

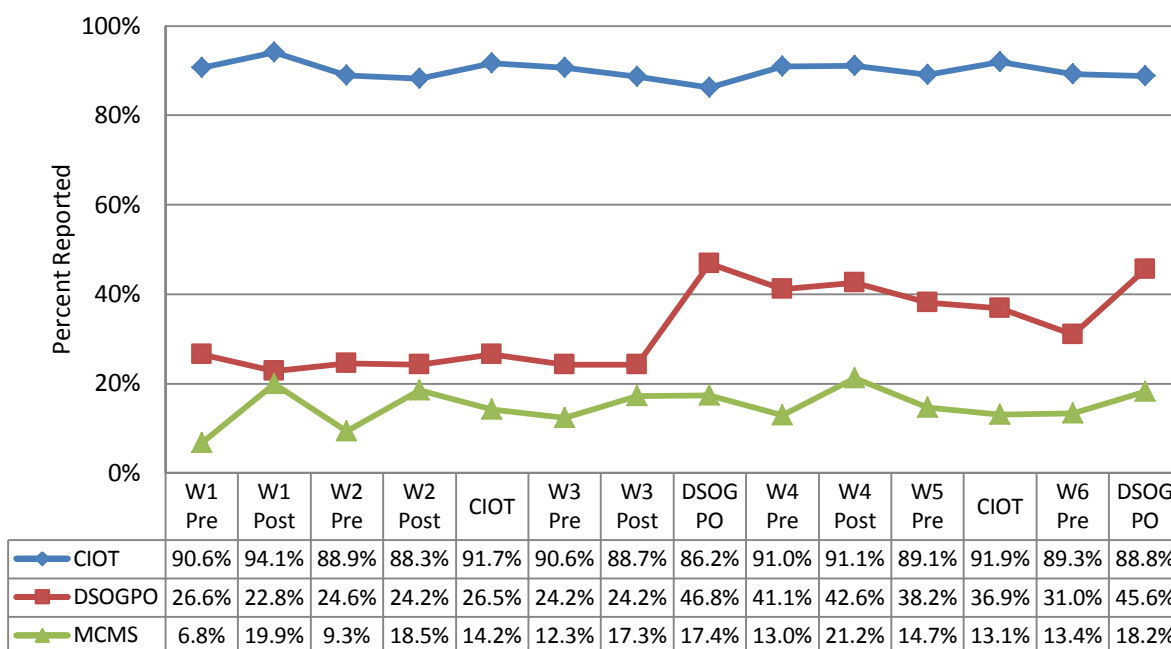


Figure 11. Recognition of the CIOT, DSOGPO and MCMS Slogans in Oklahoma

More Cops More Stops. Figure 12 shows recognition of the MCMS slogan in the general population and in the target group of young males. Recognition increased significantly with every MCMS phase where there was a pre-post survey to measure change (W1 through W4); but the largest gain was during W1, which had the strongest media. MCMS recognition did not reach appreciably higher levels after that first phase. MCMS recognition was consistently greater among young males than among the general population. Figure 12 also shows that there were increases in awareness of the MCMS slogan in both the program and control areas, but the increases in the control area were not as great as in the program area. Further, recognition of MCMS remained lower in the control area throughout most of the program period.

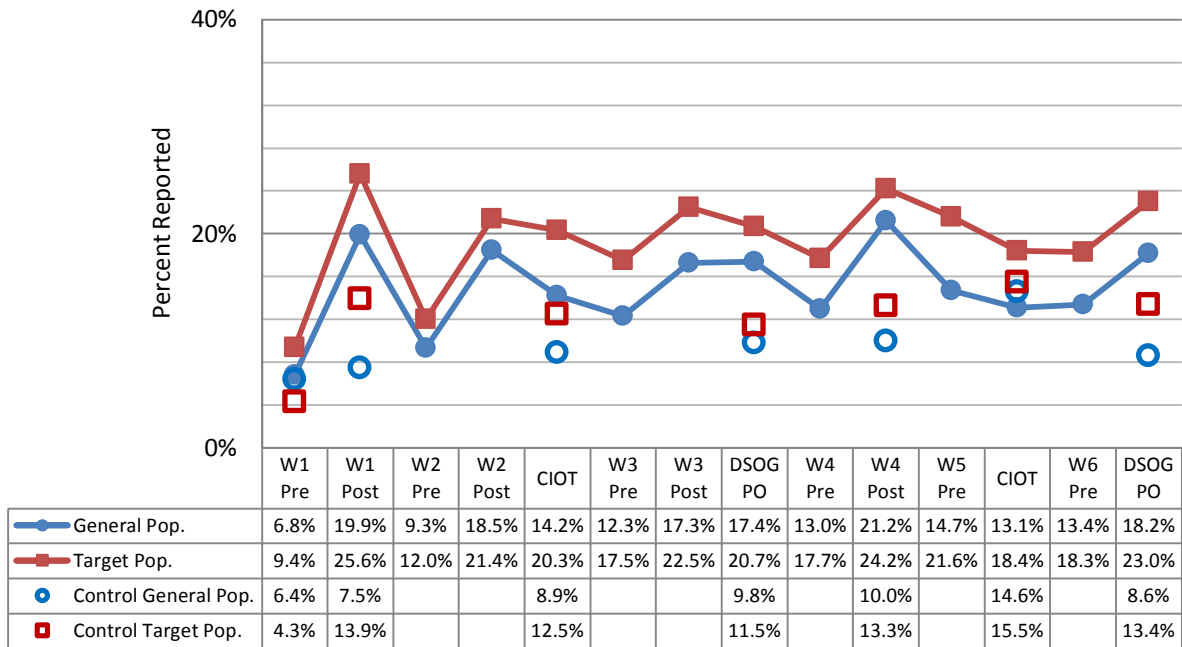


Figure 12. Recognition of the MCMS Slogan in Oklahoma: General Versus Target Populations

Drive Sober or Get Pulled Over. Figure 13 shows that recognition of the DSOGPO slogan did not change appreciably until DSOGPO activity periods. In Year 1, recognition increased significantly in both the general population [$X^2(1, N = 2,010) = 112.9, p < .05$] and among young males [$X^2(1, N = 521) = 33.6, p < .05$]. These large and significant changes occurred in both the program and control area, as would be expected in a statewide high-visibility enforcement campaign. In Year 2, there was another significant increase in awareness among the general population during the DSOGPO [$X^2(1, N = 2,010) = 112.9, p < .05$]. Awareness of DSOGPO was consistently higher among young males than in the general population throughout the program.

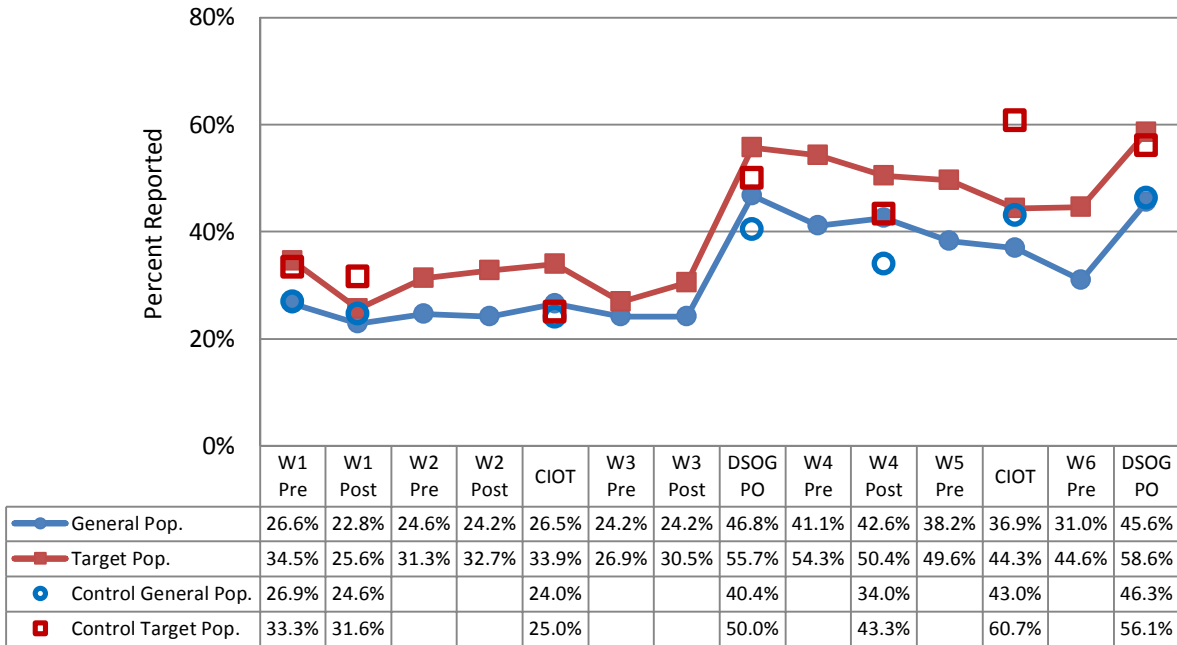


Figure 13. Recognition of the DSOGPO Slogan in Oklahoma: General Versus Target; Program Versus Control

Click It or Ticket. Recognition of Click It or Ticket (CIOT) was consistently high in both the general population and the target group throughout the two years of the program.

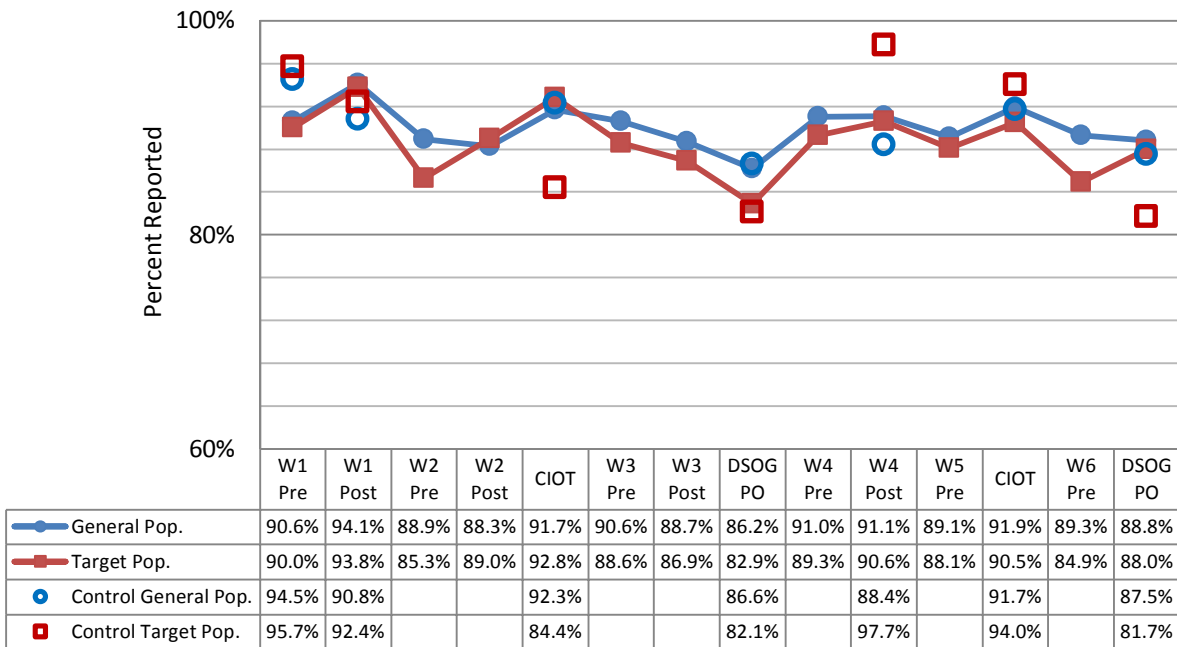


Figure 14. Recognition of the CIOT Slogan in Oklahoma: General Versus Target; Program Versus Control

As seen in Figure 14, pre-post surveys found significant increases in recognition of the CIOT slogan during MCMS W1 [$\chi^2 (1, N = 2,059) = 8.3, p < .05$] and CIOT in Year 1 [$\chi^2 (1, N = 2,320) = 6.7, p < .05$].

There was a significant increase between DSOGPO in Year 1 and W4 in Year 2 in the general population [$\chi^2 (1, N = 1,999) = 11.6, p < .05$] and among young males [$\chi^2 (1, N = 489) = 4.15, p < .05$]. Recognition of CIOT among young males was either the same or lower than recognition of CIOT in the general population.

Generally speaking, the pattern of CIOT recognition in the control area was very similar to the pattern in the program area.

Awareness of Enforcement. Figure 15 shows the trends for awareness of enforcement activities in the Oklahoma program areas.

Awareness of DUI enforcement was consistently highest, followed by seat belt, speed and nighttime seat belt enforcement. This is notable because the most frequently reported enforcement actions were for speed-related violations, followed by seat belt actions. DUI-related actions were much less frequent. Increases in awareness of DUI enforcement generally coincided with DSOGPO; increases in awareness of seat belt enforcement (general and at night) were greatest during CIOT.

Among MCMS phases, significant increases in awareness were found for general traffic (W2, W3, and W4), speed (W1, W2 and W4), seat belt (W2), and nighttime seat belt (W2).

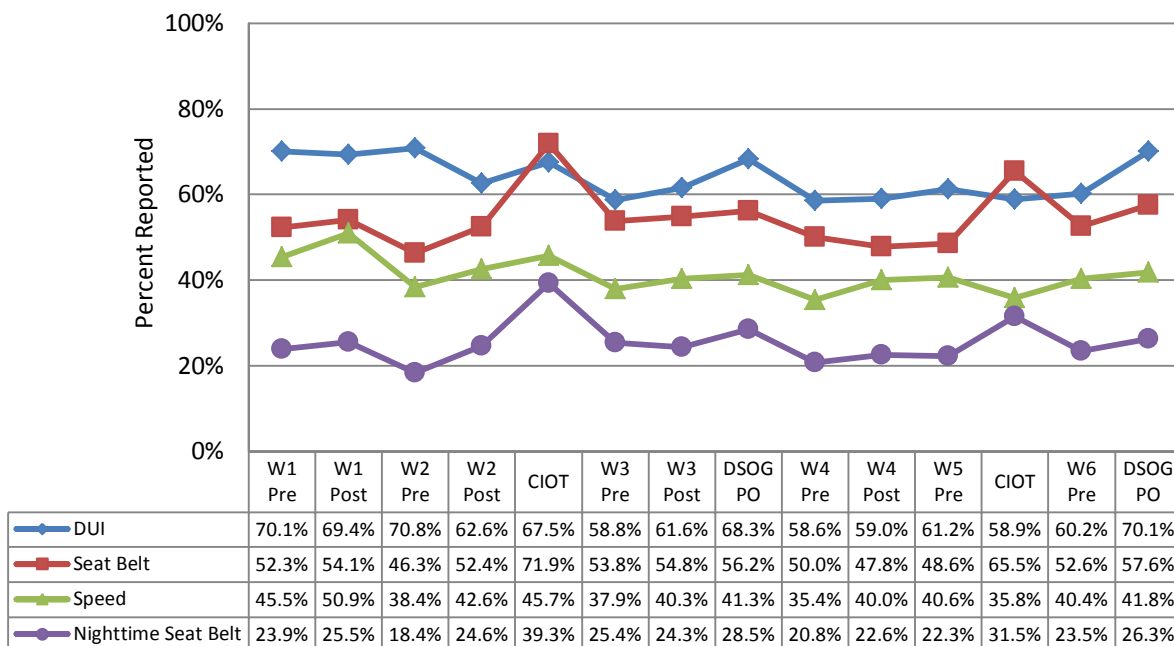


Figure 15. Awareness of Enforcement in the General Population: Oklahoma Program Area

Figures 16 and 17 display reported awareness of DUI, speed, seat belt, and nighttime seat belt enforcement in the program and control areas. The measurement points shown were those conducted in both the program and control areas. The trends were generally similar in the program and control areas. This observation may be related to the measurement periods taking place after the statewide CIOT and DSOGPO programs that were implemented in both the program and control areas.

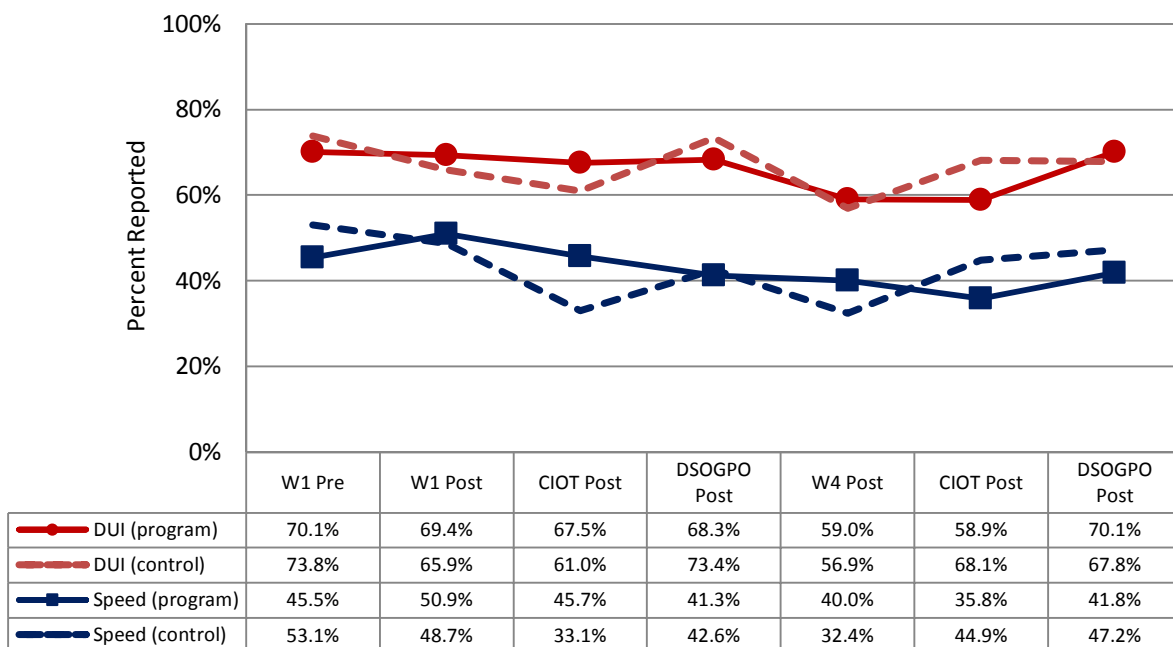


Figure 16. Awareness of DUI and Speed Enforcement in the General Population: Oklahoma Program and Control Areas

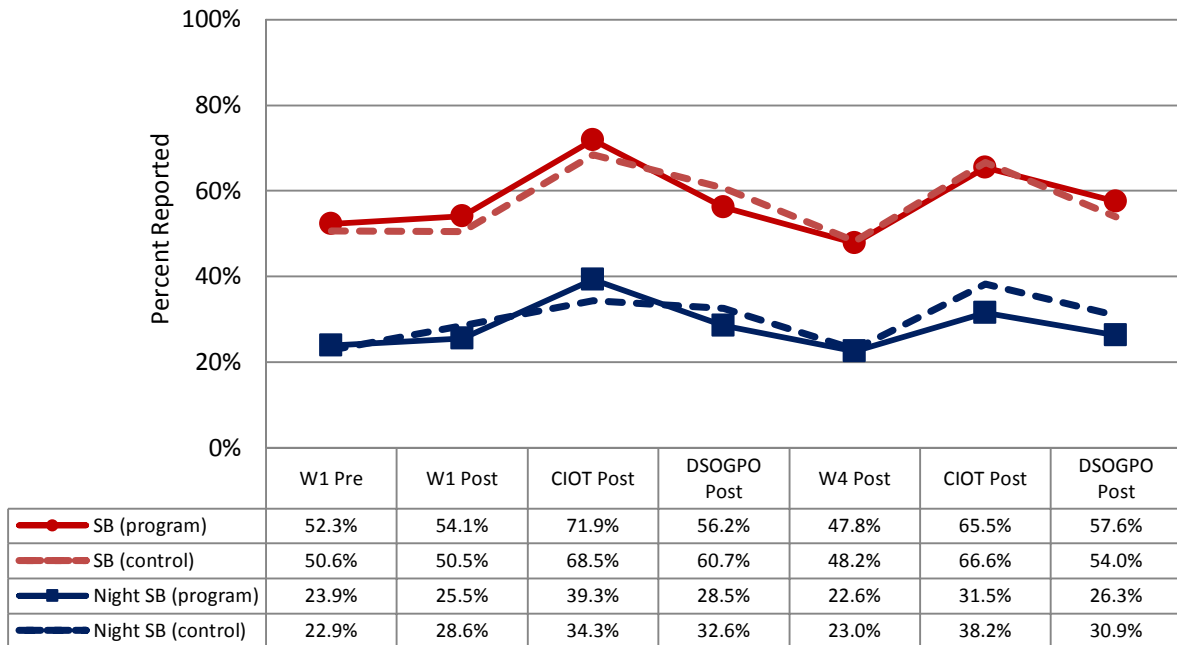


Figure 17. Awareness of Seat Belt and Nighttime Seat Belt Enforcement in the General Population: Oklahoma Program and Control Areas

General Traffic Enforcement. A new variable titled “awareness of general traffic enforcement” was added after W1. Figure 18 shows awareness of general traffic enforcement increased most during the combined periods of W2 and CIOT [+15 points; $\chi^2(1, N = 2,066) = 46.49, p < .05$]; W3 and DSOGPO [+10 points; $\chi^2(1, N = 2,178) = 22.05, p < .05$]; and W6 and DSOGPO [+12 points; $\chi^2(1, N = 2,021) = 13.04, p < .05$]. There also was a modest increase associated with W4 [+8 points; $\chi^2(1, N = 2,278) = 20.75, p < .05$]. These increases in awareness of “general traffic enforcement” generally coincided with increases measured using the averages of the Key-3 enforcement actions. With the exception of CIOT in Year 1, none of the differences between the program and control areas were significant.

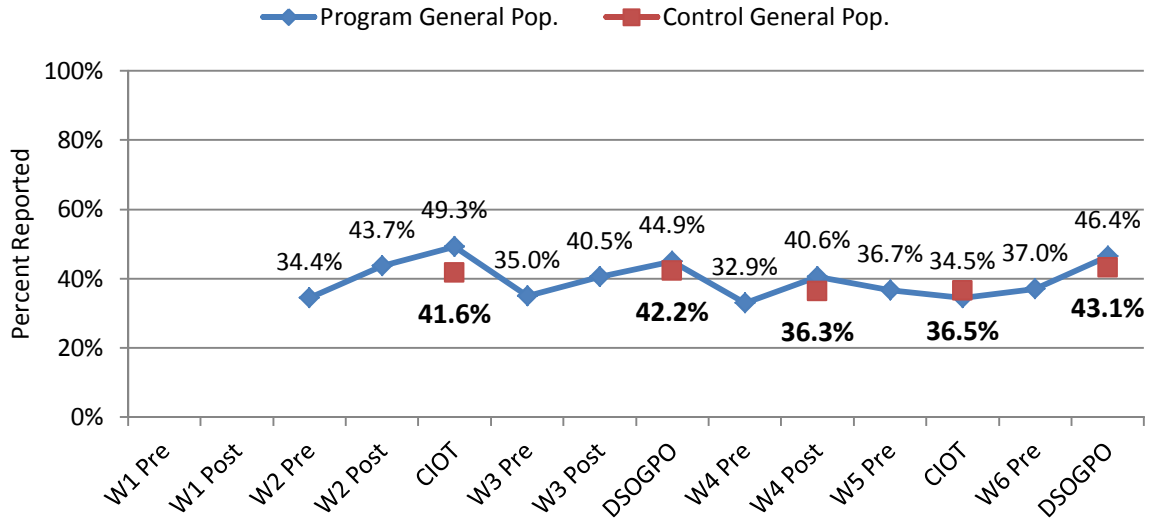


Figure 18. Awareness of “General Traffic Enforcement”: General Population; Program and Control Areas²

Sources of Enforcement Awareness. Paid media campaigns associated with the MCMS program focused primarily on television and radio advertising with a small portion of the budget used for Internet and related advertising. State-sponsored campaigns associated with CIOT and DSOGPO also focused on television and radio but included print media and outdoor advertising as well as “other” media (other sources including print media, checkpoints and friends are not shown in Figure 19).

Figure 19 shows that in both the general population and the target group of young males, television was the most frequently cited source of enforcement awareness, followed by radio and then Internet. Television was less often mentioned by young males than by general population respondents.

² This survey index was not included for W1. It was added for W2.

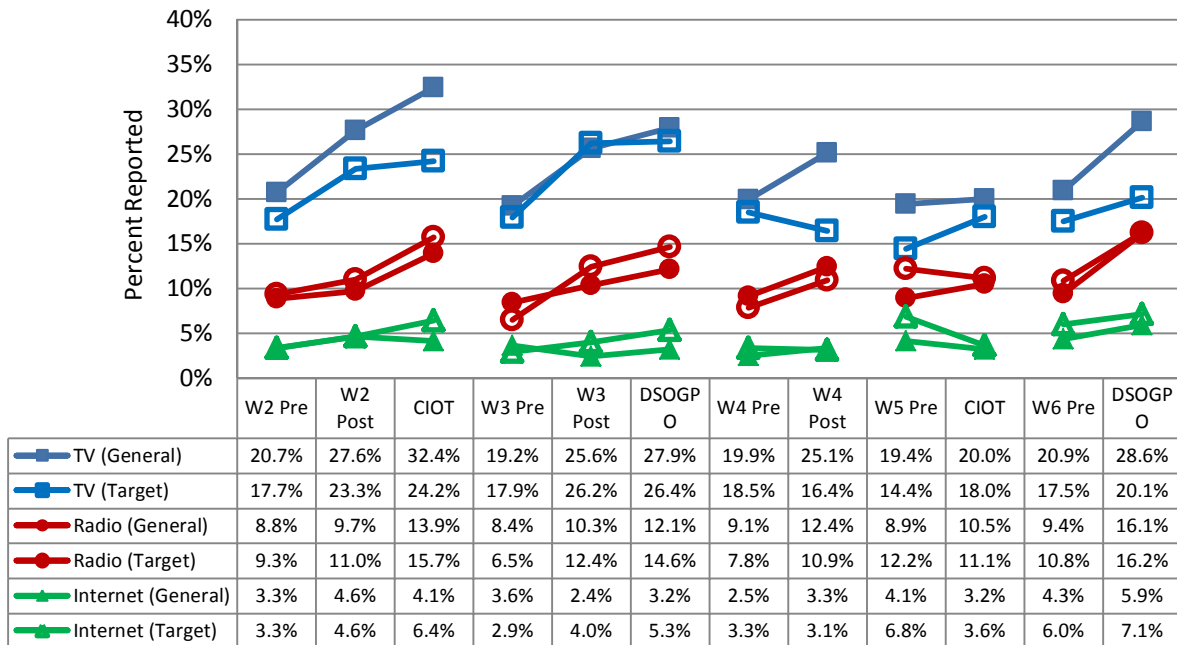


Figure 19. Reported Sources of Enforcement Awareness: In the General Population and Among Young Males

Perceived Risk of a Ticket or an Arrest. Questions in the DMV survey also asked how likely it would be to get a ticket or be arrested for driving unbuckled, speeding, or driving after drinking. Response options included: very likely, somewhat likely, somewhat unlikely, very unlikely, and don't know.

Perceived Risk by Violation Type (and Population Group): As indicated in Figure 20, an average of 63% of respondents in the general population (64% of young males) thought that driving after drinking would “very likely” result in an arrest; an average of 46% of the general population (43% of young males) said that speeding would very likely result in a ticket; and 38% of the general population (34% of young males) said that riding unbuckled would very likely result in a ticket.

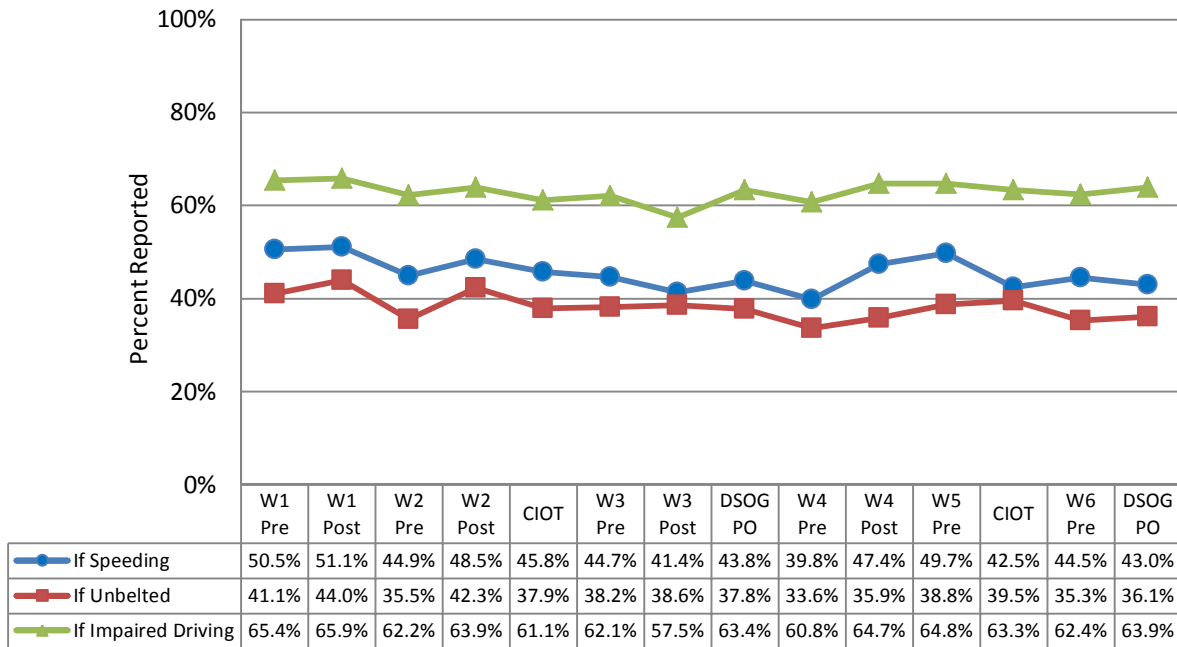


Figure 20. Perception That a Driver Would Be “Very Likely” to Be Ticketed or Arrested for a Traffic Safety Violation in the General Population in Oklahoma

Change Associated With MCMS Phases. In the general population, W2 was associated with an increase in the perceived risk of riding unbuckled [+6.8 points; $\chi^2(1, N = 2,571) = 12.54, p < .05$], and W4 was associated with a significant gain in the perceived risk associated with speeding [+7.6 points; $\chi^2(1, N = 2,012) = 11.79, p < .05$].

There was a significant increase in risk of a ticket for not buckling up during W2 among young males, where there was a 12.4 point increase in perceived risk for riding unbuckled [$\chi^2(1, N = 653) = 10.92, p < .05$]. In addition, there was a 10.8 point increase in the perceived risk of a speeding ticket during W4 [$\chi^2(1, N = 496) = 5.85, p < .05$].

Overall Change in Perceived Risk. There were no overall pre-to-post program increases in perceived risk in the general population for any of the three violation types. In fact, there were significant declines in the perceived risk associated with speeding and riding unbuckled. The net change in the perceived risk of getting a ticket for speeding was -7.5 percentage points [$\chi^2(1, N = 2,268) = 12.67, p < .05$]; and the net change for riding unbelted was -5.0 points [$\chi^2(1, N = 2,278) = 5.99, p < .05$]. There was no statistically significant change in the perceived risk of arrest for driving after drinking.

There appeared to be similar declines in the target group of young males, but only one reached statistical significance at the 0.05 level. There was a 9.9 point decline in the perceived risk associated with speeding [$\chi^2(1, N = 609) = 6.22, p < .05$].

There were indicators of decreases in perceived risk associated with all three violation types in the control area among both the general population and target group, but most of these measured declines did not reach statistical significance at the 0.05 level. In the general population, the perceived risk for riding unbelted declined by a statistically significant 10.3 points ($p < .05$) in the control area.

OBSERVED SEAT BELT USE

Overall Trends. Figure 21 shows the 2-year trends for observed seat belt use. Daytime usage was 85.3% at baseline and 87.7% at the end of the program period, representing a gain of 2.4 percentage points [$\chi^2 (1, N = 31,989) = 26.8, p < .05$]. The change in nighttime usage was not statistically significant at the 0.05 level.

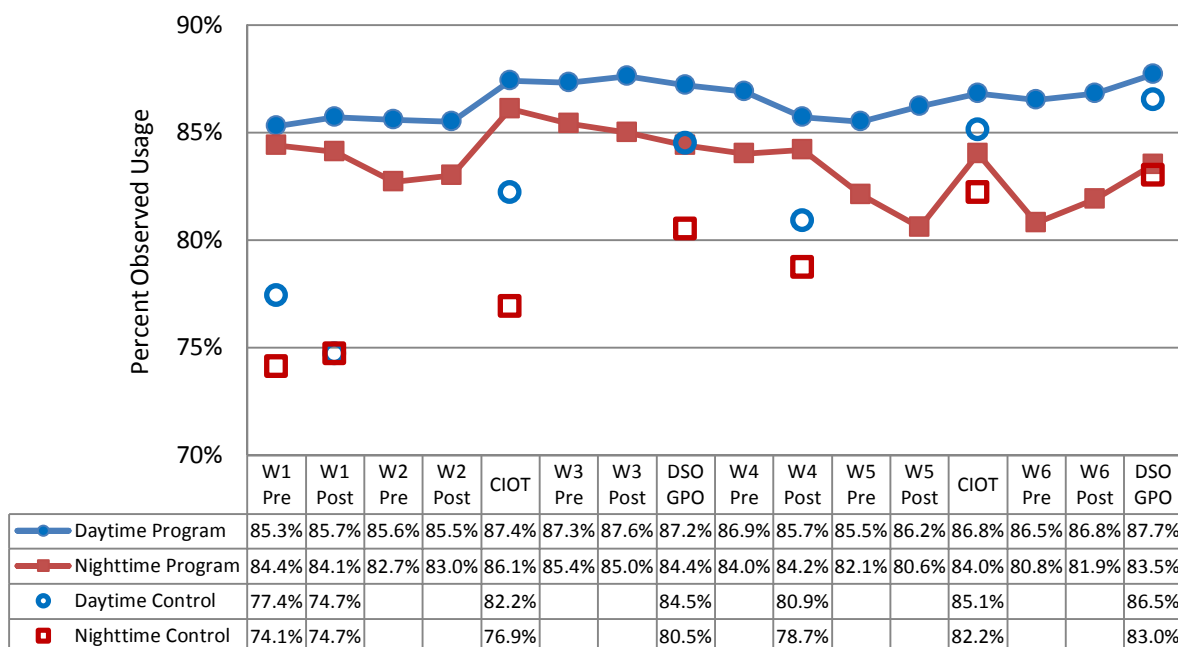


Figure 21. Observed Seat Belt Usage in Oklahoma: Day and Night: Program and Control

Program Versus Control. Daytime and nighttime seat belt usage rates were significantly higher in the program area than in the control area from baseline through the end of Year 1. That difference diminished as the control area daytime usage increased by 9.1 points [$\chi^2 (1, N = 7,393) = 103.6, p < .05$] and control area nighttime usage increased by 8.9 points [$\chi^2 (1, N = 1,699) = 20.1, p < .05$]. At the end of Year 2, there was little difference between program and control areas (daytime or nighttime), although daytime usage was still 1.2 points higher in the program area than in the control area [$\chi^2 (1, N = 18,696) = 3.92, p < .05$]. Figure 21 shows the lower baseline rates in the control area, which likely contributed to the greater gains.

Daytime Usage by DMA. Figure 22 shows the trends for observed daytime usage in the two Oklahoma program DMAs. In Tulsa, usage started at 85.6%; increased significantly by +3.0 percentage points through W1 up to W2 [$\chi^2 (1, N = 12,239) = 24.38, p < .05$]. Following a 1.2 point decline associated with W2 [$\chi^2 (1, N = 12,745) = 4.39, p < .05$], there was a series of three smaller increases that totaled 1.3 points through the end of W3 [$\chi^2 (1, N = 12,349) = 5.12, p < .05$], and a decline of 1.3 points during DSOGPO [$\chi^2 (1, N = 11,659) = 4.50, p < .05$]. This series of increases and declines left observed usage at 87.4% at the end of Year 1, for a gain of 1.8 points [$\chi^2 (1, N = 11,908) = 8.58, p < .05$].

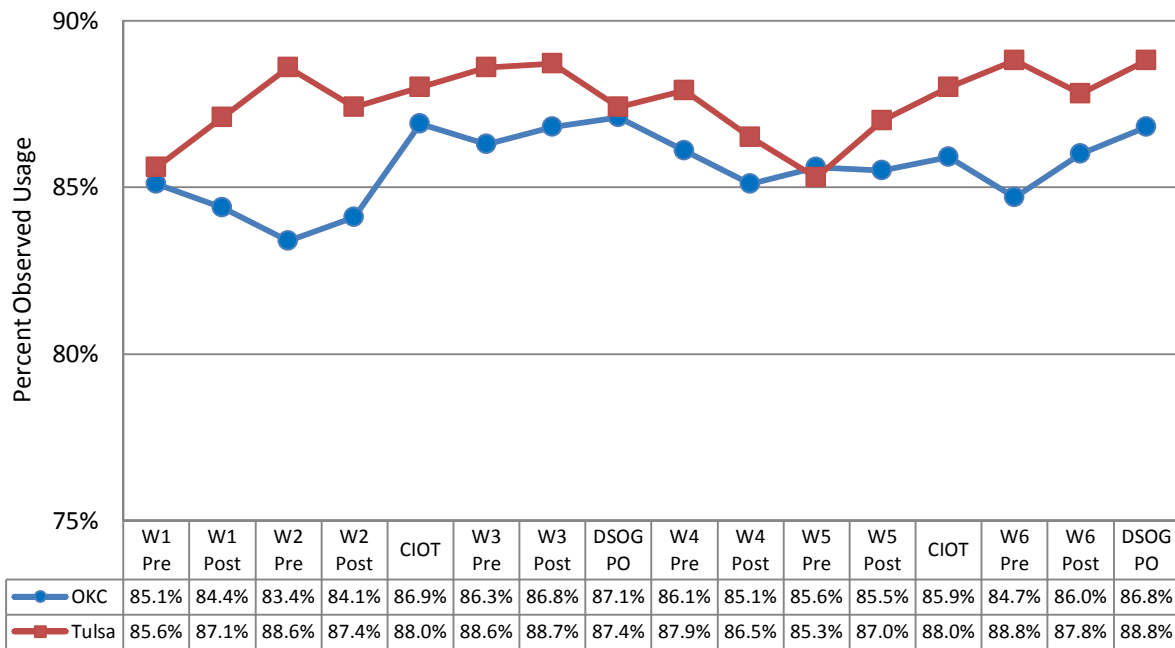


Figure 22. Observed Daytime Seat Belt Usage in the Tulsa and OKC DMAs

During Year 2 in the Tulsa DMA, there was a 2.6 point decline associated with W4 and the time interval that followed [$\chi^2 (1, N = 12,299) = 17.79, p < .05$]; and then an increase associated with W5 [+3.5 points; $\chi^2 (1, N = 13,135) = 35.78, p < .05$.] With no significant changes during W6, this series of increases and declines left no statistically significant difference between the pre W4 rate of 87.9% and the post program rate of 88.8%. The primary gain during Year 2 was associated with W5 and the time interval that followed, counterbalanced by a significant decline associated with W4. Over Years 1 and 2, there was a significant 3.2 point gain in the Tulsa DMA, from 85.6% to 88.8% [$\chi^2 (1, N = 12,882) = 29.3, p < .05$].

In the Oklahoma City DMA (OKC), daytime usage declined during W1 and the time interval that followed; then increased by 3.5 points during W2 [$\chi^2 (1, N = 16,802) = 40.57, p < .05$]. There was no significant increase during W3; leaving the total gain for Year 1 at 2.0 points, from 85.1% to 87.1% [$\chi^2 (1, N = 15,069) = 12.93, p < .05$]. During Year 2, daytime usage declined during W4 and then did not change through W5. In spite of a significant gain during W6 [+2.1 points; $\chi^2 (1, N = 16,669) = 15.2, p < .05$], there was no significant overall gain during Year 2. Over Years 1 and 2, daytime usage in OKC increased by 1.7 points [$\chi^2 (1, N = 15,323) = 9.49, p < .05$].

Nighttime Usage by DMA. Figure 23 shows the trends for nighttime usage in the two DMAs. Neither experienced a significant change during W1. However, there was an increase in Tulsa, accompanied by a decline in OKC between W1 and W2. Usage then increased in OKC during CIOT [+4.3 points; $\chi^2 (1, N = 5,835) = 18.36, p < .05$]. At the end of Year 1, the net change in OKC was non-significant; the net change in Tulsa was also non-significant.

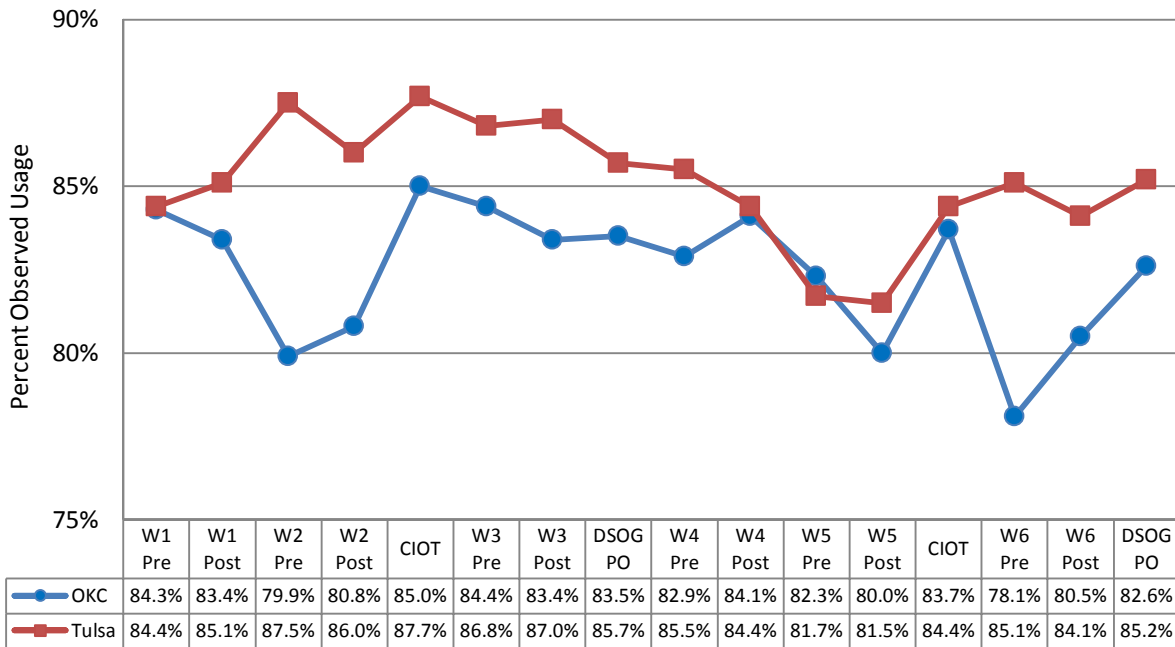


Figure 23. Observed Nighttime Seat Belt Usage in the Tulsa and OKC DMAs

Nighttime usage generally continued to decline in both DMAs during Year 2, until CIOT, when there was a 3.7 percentage point increase in OKC [$\chi^2(1, N = 5,893) = 13.53, p < .05$] and a 2.9 point increase in Tulsa [$\chi^2(1, N = 3,840) = 3.66, p < .05$]. Immediately following CIOT, OKC experienced one of the largest declines in usage (day or night) in either DMA during either year of the program [-5.6 points; $\chi^2(1, N = 6,176) = 31.19, p < .05$]. During W6 and DSOGPO, nighttime usage increased by 4.5 points in OKC [$\chi^2(1, N = 6,445) = 20.45, p < .05$]. Year 2 was associated with non-significant net declines in nighttime usage in both DMAs. No significant changes were observed in nighttime usage from pre- to post-program in either DMA.

Relationships Between Program Activity and Observed Seat Belt Usage. There was a non-significant correlation between daytime usage and number of enforcement contacts in the Oklahoma program area (Pearson’s $r = 0.61, N = 10, p = 0.06$); and almost no correlation between usage and number of checkpoints (Pearson’s $r = 0.06, N = 10, p = 0.857$).

The highest correlation between activity variables and daytime usage was with news stories (Pearson’s $r = 0.70, N = 10, p = 0.024$). There was a non-significant correlation between news stories and number of LEA contacts (Pearson’s $r = 0.61, N = 10, p = 0.06$). The paid media variables were not positively correlated with daytime usage; in fact, there were modest, non-significant, negative correlations between GRPs and usage (Pearson’s $r = -.525, N = 6, p = .285$), and between media expenditures and usage (Pearson’s $r = -.348, N = 10, p = 0.324$).

All of the paid media variables were highly correlated with each other: For example, media expenditures and paid ads (Pearson’s $r = 0.743, N = 10, p = 0.014$); media expenditures and GRPs (Pearson’s $r = 0.97, N = 6, p = .001$); and number of ads and GRPs (Pearson’s $r = 0.94, N = 6, p = 0.005$).

The correlations between nighttime usage and activity variables were less strong, but the number of news stories again had the strongest correlation with nighttime usage (Pearson's $r = 0.60$, $p = 0.067$). The sample sizes for these analyses were small (i.e., 6 to 10 pairs per analysis).

IV. TENNESSEE RESULTS

PROGRAM ACTIVITY LEVELS

Enforcement

Law enforcement agencies in Tennessee reported the number of LEA actions for each MCMS phase, each CIOT mobilization, and each DSOGPO crackdown. Both the total number of enforcement actions and Key-3 targeted traffic offences (DUI, seat belt/child seat and speeding) were reported. Total actions included Key-3 written warnings, citations, and arrests, as well as unlicensed driving, suspended or revoked driving, drug violations, stolen vehicles, and fugitives apprehended. The primary measures used to assess enforcement activity in Tennessee were number of participating LEAs, total number of enforcement actions, and number of Key-3 enforcement actions. Table 4 displays population-based rates of enforcement activity. Rates were calculated per either 10,000 or 100,000 population depending on the index. Rates per 10,000 population were calculated for the total law enforcement and Key-3 actions, and rates per 100,000 population were calculated for checkpoints to enhance interpretation of the index.

Table 4. Numbers and Rates (per 10K or 100K Residents) for Tennessee Enforcement Indices

Measure	W1	W2	CIOT	W3	DSOGPO	W4	W5	CIOT	W6	DSOGPO
Pop. (m)	3.86	3.86	6.45	3.86	6.45	3.86	3.86	6.45	3.86	6.45
LEAs	133	179	377	169	362	187	187	351	187	352
Actions	10,694	21,050	56,660	15,870	45,972	20,915	19,352	52,594	17,644	62,810
per 10K	27.7	54.5	87.8	41.1	71.2	54.1	50.1	81.0	45.7	96.7
Key-3	8,585	13,659	38,334	11,246	42,085	12,794	12,100	33,382	11,134	39,069
per 10K	22.2	35.3	59.4	29.1	65.2	33.1	31.3	51.4	28.8	60.1
Key-3 %	80%	65%	68%	71%	92%	61%	63%	63%	63%	62%
Checkpoints	11	15	40	14	45	48	91	223	40	263
per 100K	0.28	0.39	0.62	0.36	0.70	1.24	2.36	3.43	1.04	4.05

(m) = millions

Actions = Key-3 written warnings, citations, and arrests, as well as unlicensed driving, suspended or revoked driving, drug violations, stolen vehicles, and fugitives apprehended

Key-3 % = % of Total Actions

Note. Different denominators used to calculate rates to enhance interpretability of indices

Number of Participating Agencies. Figure 24 shows the reported number of participating law enforcement agencies in Tennessee. Fewer agencies participated in the MCMS phases (W1 through W6) than in CIOT and DSOGPO. The number of LEAs participating in MCMS increased slightly over time, from an average of 160 to 187 from Year 1 to Year 2.

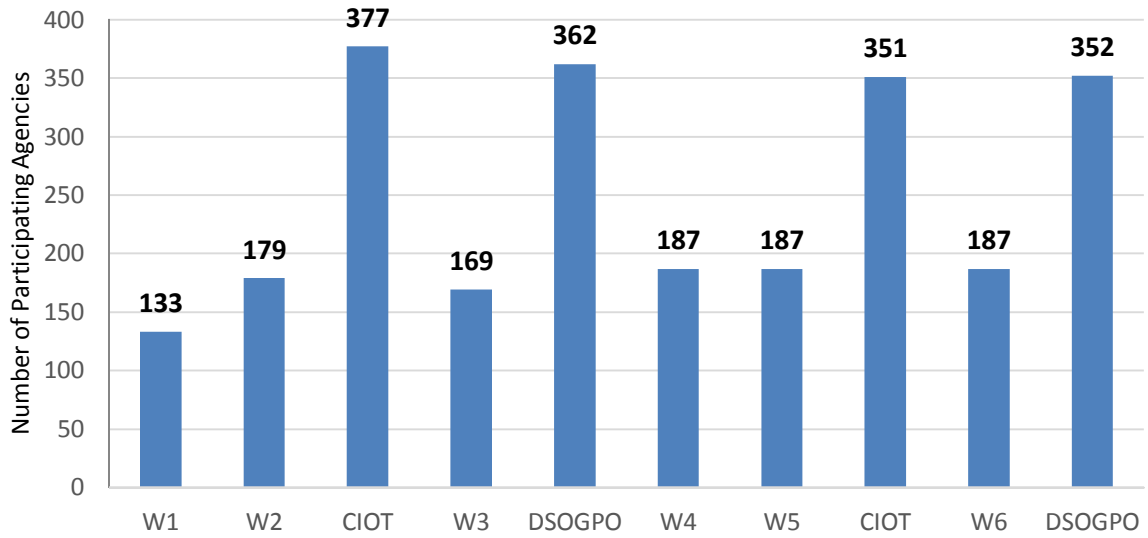


Figure 24. Number of Participating Agencies in Tennessee

Total LEA Actions. Total actions included Key-3 written warnings, citations, and arrests, as well as unlicensed driving, suspended or revoked driving, drug violations, stolen vehicles, and fugitives apprehended. Figure 25 shows the total number of reported enforcement actions per 10,000 residents. The rate of enforcement actions was higher during CIOT and DSOGPO than during MCMS, possibly due to the longer duration of the statewide campaigns and the larger number of participating LEAs.

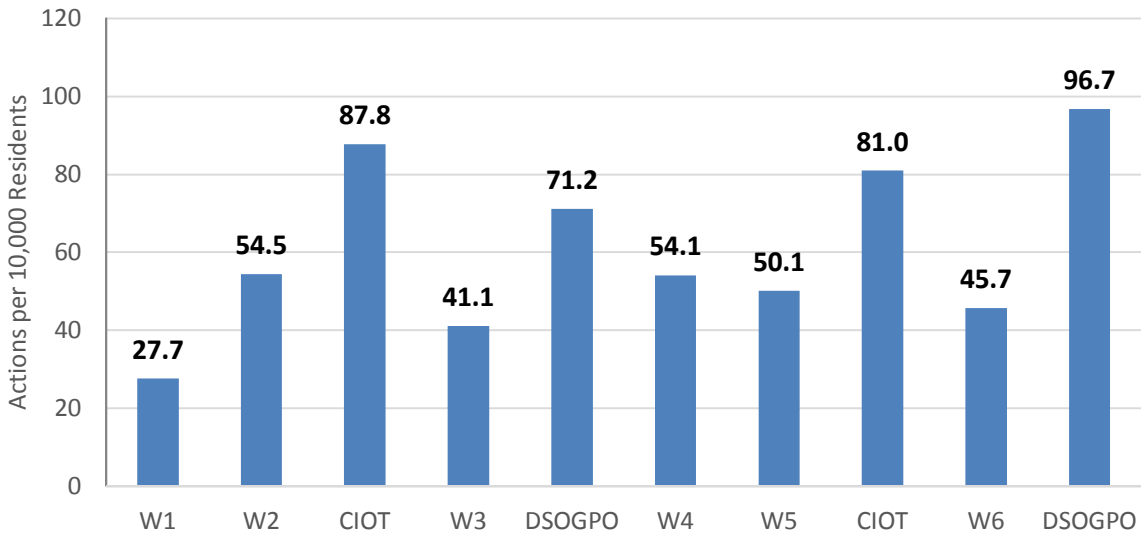


Figure 25. Number of Total Enforcement Actions (per 10,000 Residents) in Tennessee

Key-3 Enforcement Contacts as a Percentage of Total Actions. Key-3 actions constituted about 70% of all contacts reported by Tennessee’s LEAs during the MCMS and statewide campaigns (75% in Year 1; 62% in Year 2). Examination of these data also indicated that the

Key-3 percentage of total violations was greater during Year 1 than Year 2 (80% and 63%, respectively).

Key-3 Enforcement Rates (Aggregated). As seen in Figure 26, the rate of Key-3 enforcement actions was nearly twice as high during statewide campaigns (about 59 per 10,000 residents) as during MCMS phases (about 30 per 10,000 residents).

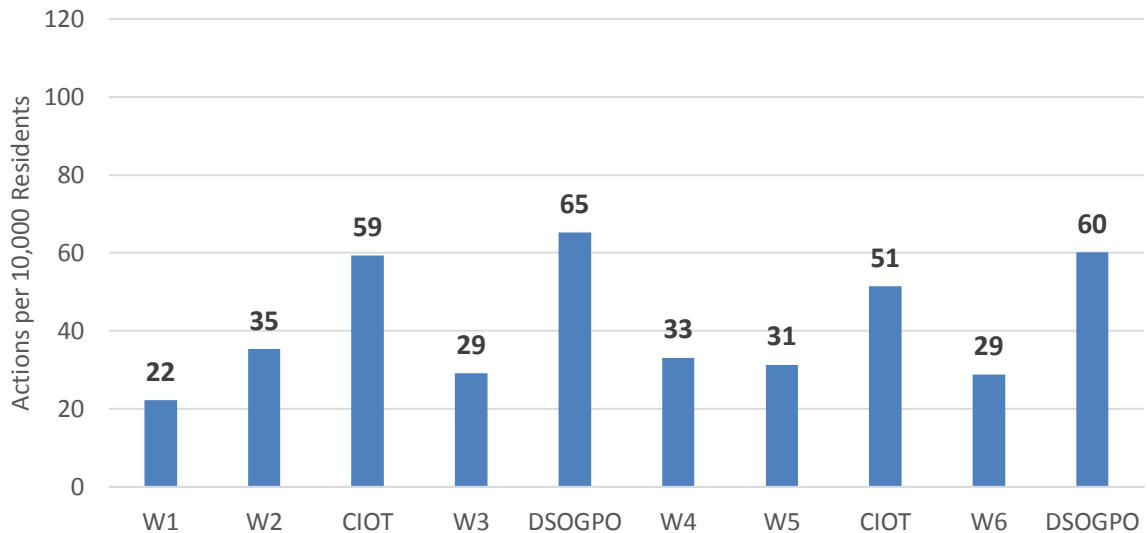


Figure 26. Number of Key-3 Enforcement Actions (per 10,000 Residents) in Tennessee (Aggregated)

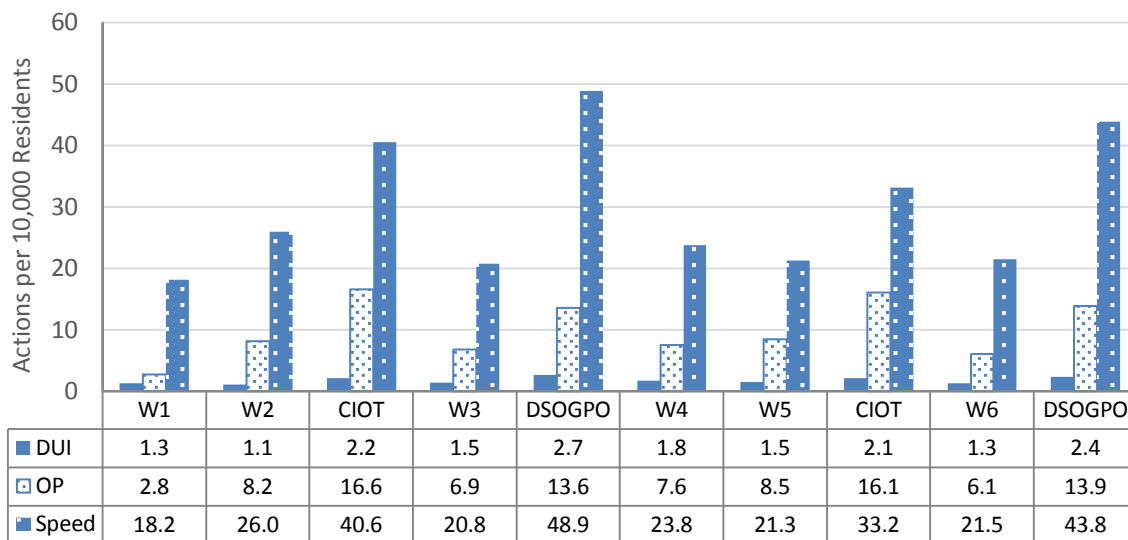


Figure 27. Number of Key-3 Enforcement Actions (per 10,000 Residents) in Tennessee (Disaggregated)

Key-3 Enforcement Actions (Disaggregated). Figure 27 shows Key-3 enforcement rates, disaggregated by DUI, OP (i.e., seat belt plus child restraint), and speed. Speed-related contacts

were the most prevalent LEA action. The next highest overall rates were for OP-related actions. The rate of DUI contacts was very low in each phase.

DUI Enforcement Rates. Figure 28 shows DUI enforcement rates. The highest DUI rates were associated with DSOGPO. More modest rates were associated with CIOT. The MCMS phases immediately preceding the DSOGPO crackdowns (W3 and W6) had more modest DUI rates (1.5 during W3; 1.3 during W6). The average DUI rate associated with MCMS phases was about 1.4 arrests per 10,000 residents, compared with 2.5 during DSOGPO crackdowns. Average DUI rates were similar during Years 1 and 2 (about 1.5 in both years).

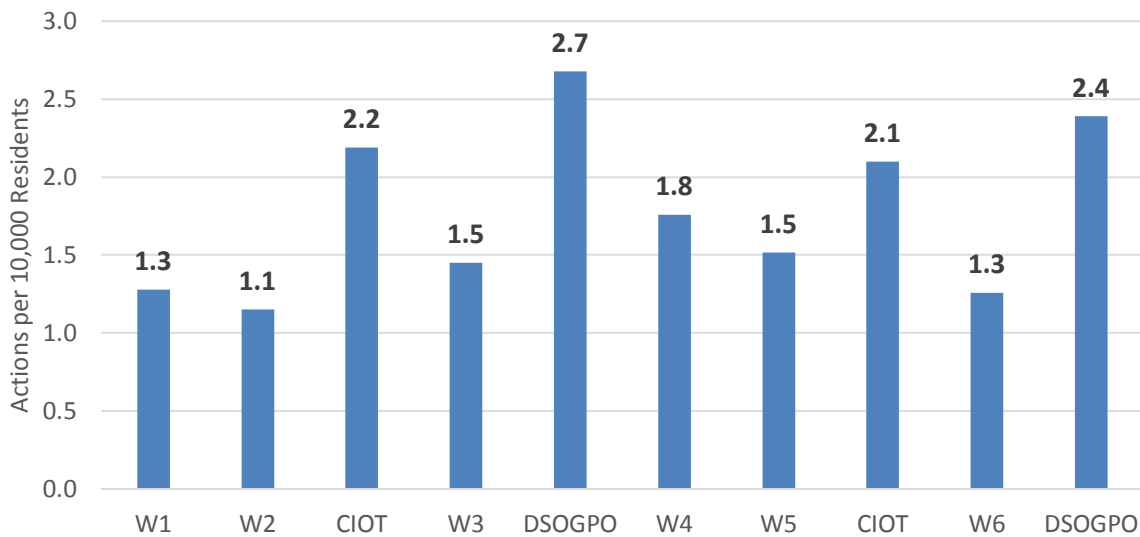


Figure 28. Number of DUI Enforcement Actions (per 10,000 Residents) in Tennessee

Checkpoints. As featured in Figure 29, reported checkpoint operations increased from 125 to 665 from Year 1 to 2, respectively. The number of checkpoints reported increased from Year 1 to 2 by 432% overall, by 472% during statewide campaigns, and by about 350% during MCMS phases. DSOGPO and CIOT were associated with more checkpoints than MCMS phases. Eighty-five of 125 total checkpoints in Year 1 (68%) and 486 of 665 total checkpoints in Year 2 (73%) were part of statewide efforts. Modestly more checkpoints were associated with DSOGPO than with CIOT.

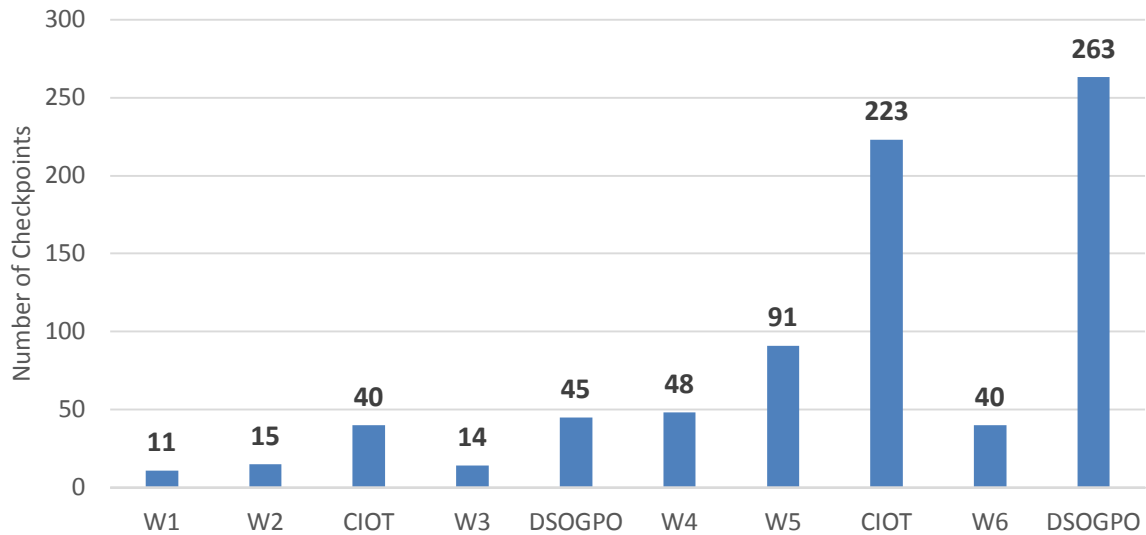


Figure 29. Number of Checkpoints Reported in Tennessee

Earned Media

State-Reported Results. Table 5 shows the number of reported events and stories (i.e., TV, radio, print and total) and the rate of events and stories per 100,000 residents for each program phase. Figure 30 shows the pattern of reported news event and story activity over time. There was more earned media activity reported in Year 2 (37 events; 488 stories) than in Year 1 (23 events; 222 stories).

Table 5. Numbers and Rates of News Events and News Stories in Tennessee

Measure	W1	W2	CIOT	W3	DSOGPO	W4	W5	CIOT	W6	DSOGPO
# News Events	4	7	5	1	6	8	3	18	0	8
# per 100K	0.10	0.18	0.08	0.03	0.09	0.21	0.08	0.28	0.00	0.12
# TV Stories	9	4	12	4	8	3	23	36	2	9
# per 100K	0.23	0.10	0.19	0.10	0.12	0.08	0.60	0.56	0.05	0.14
# Radio Stories	1	25	15	26	12	26	34	43	21	39
# per 100K	0.03	0.65	0.23	0.67	0.19	0.67	0.88	0.66	0.54	0.60
# Print Stories	0	61	2	35	8	49	48	74	35	46
# per 100K	0.00	1.58	0.03	0.91	0.12	1.27	1.24	1.14	0.91	0.71
Total News Stories ¹	10	90	29	65	28	78	105	153	58	94
# per 100K	0.26	2.33	0.45	1.68	0.43	2.02	2.72	2.37	1.50	1.45

Note ¹: Total number of stories is for TV, radio, and print (only); News Events not included.

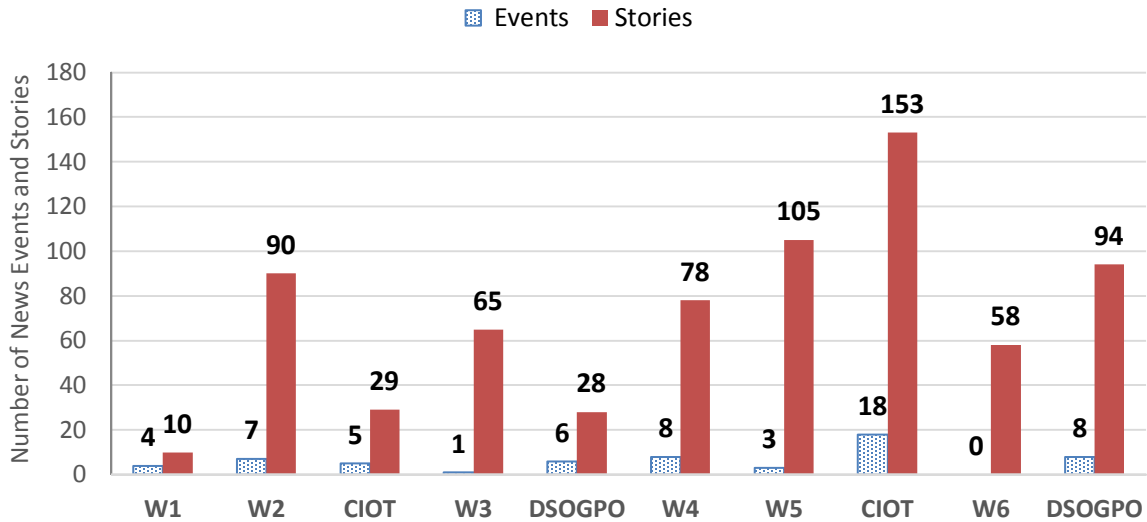


Figure 30. News Events and Stories in Tennessee

Custom Scoop. A media monitoring effort was conducted for several of the MCMS program phases. The monitoring of W1 took place after the fact, however, and thus had less specificity with regard to numbers and trends. The W2 report provided the most complete information regarding the types and timing of stories being aired during MCMS.

In Tennessee, Custom Scoop found 541 traffic safety-related stories associated with W2: 67 stories dealt with issues targeted by the MCMS program; 16 specifically mentioned the MCMS effort; and the remaining stories dealt more generally with seat belt use (18 stories), drunk driving (22) and child passenger safety (3).

Stories specific to MCMS peaked on the day that enforcement began, which was about three days after the start of paid media. This “peak” was modest, and it trailed off rapidly. Daily newspapers accounted for 44% of the stories; radio and television represented 31% and 12%, respectively. Considering the very different sources for these data, the results were remarkably similar. The data from Custom Scoop reinforced the prominence of print media as the most frequent source of stories. The data from Custom Scoop also showed the small percentage of MCMS-specific stories.

PAID MEDIA

As in Oklahoma, the objective of the communications program was to get drivers (primarily young males, ages 18-34) to believe that heightened traffic enforcement was taking place and that their risk of being stopped and ticketed for a traffic violation in Tennessee was elevated. The behaviors focused on were driving after drinking, riding without a seat belt, and speeding.

The strength of the paid media effort in Tennessee was assessed by funding levels, number of ads aired on television or radio and GRPs achieved by television and radio ads. Internet activity

was measured in impressions when available. Table 6 shows the values for the three indices (and their population-based rates).

Table 6. Numbers and Rates for Paid Media in Tennessee

Measure	W1	W2	CIOT	W3	DSOGPO	W4	W5	CIOT	W6	DSOGPO
Pop. (m)	3.9 m	3.9 m	6.5 m	3.9 m	6.5 m	3.9 m	3.9 m	6.5 m	3.9 m	6.5 m
\$ Spent	\$344K	\$170K	\$0	\$166K	\$0	\$254K	\$162K	\$0	\$163K	\$109K
per Capita	\$0.09	\$0.04	\$0	\$0.04	\$0	\$0.07	\$0.04	\$0	\$0.04	\$0.02
# Ads	3,175	2,411	0	1,903	0	3,715	1,906	0	2,404	UNK
per 100K	82	63	0	49	0	96	49	0	62	UNK
GRPs	922	433	0	382	0	690	448	0	163	UNK
GRPs are averages across the three DMAs in the Program Area; Numbers for W1 and W4 are for 2 weeks										

Media Expenditures. Figure 31 shows per capita media expenditures for each phase of the program. As was the case in Oklahoma, the media flights for W1 and W4 were 14 days in duration, and both were standalone phases. All other MCMS phases involved 7 days of advertising with 4 days in the first week and 3 days in the second week.



Figure 31. Per Capita Media Expenditures in Tennessee

Tennessee did not fund media campaigns for CIOT or DSOGPO in Year 1 or CIOT in Year 2. The State did provide funding DSOGPO in Year 2.

Expenditures for national paid media campaigns for CIOT and DSOGPO are not included in Table 6 or Figure 31. About \$8 million in funding was provided (nationwide) for each of these campaigns in each year. These media campaigns emphasized enforcement and single-focus messages (i.e., seat belt use or impaired driving), without any mention of the MCMS campaign.

MCMS message funding was allocated primarily to television (nearly 80%), with most of the remainder going to radio; and a modest amount (\$5,000) going to Internet advertising during each MCMS phase.

Ads Achieved. Figure 32 shows the distribution of radio and television ads achieved. These are population-based rates per 100,000 residents. The pattern for ads achieved was very similar to the pattern for media expenditures with W1 and W4 producing the greatest numbers of ads.

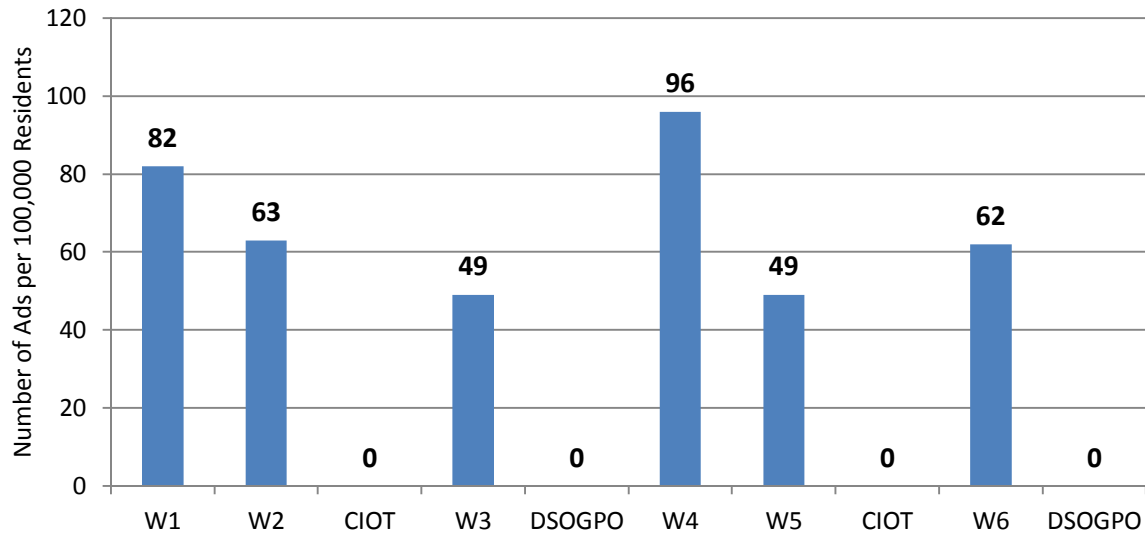


Figure 32. Number of Ads Reported (per 100,000 Population) in Tennessee

Gross Rating Points. The third index of media activity was GRPs. As in Oklahoma, GRPs were reported for all 6 MCMS phases but were not available for any of the four statewide campaigns (of which only DSOGPO in Year 2 was funded). Figure 33 shows the average number of GRPs. W1 and W4 had the highest averages with 922 and 690 GRPs for 14-day flights, respectively (translating 461 and 345 per week). W2 and W5 had the next highest averages (433 and 448 GRPs respectively, for 7-day flights). Both of these MCMS phases preceded CIOT. W3 and W6 had averages of 382 and 403 GRPs, respectively, for 7-day flights. Each of these MCMS phases preceded DSOGPO.

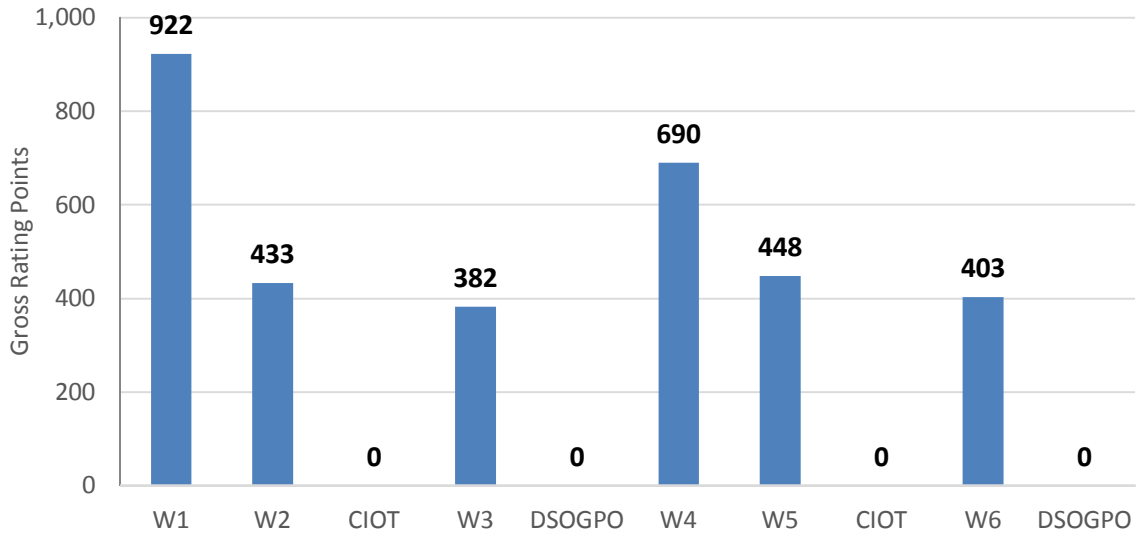


Figure 33. Average Number of Gross Rating Points in Tennessee

AWARENESS

Recognition of Various Campaign Slogans. Figure 34 shows the percent reported recognition for the three slogans among the general population in Tennessee (i.e., *More Cops More Stops*; *Drive Sober or Get Pulled Over*; and *Click It or Ticket*).

The CIOT slogan had the highest reported recognition levels at about 90% throughout the program. Reported recognition of the DSOGPO message increased during DSOGPO in Years 1 and 2 by 17 and 18 percentage points, respectively. MCMS had the lowest recognition levels. The largest increases in MCMS recognition were associated with W1 and W4, which had the strongest paid media programs.

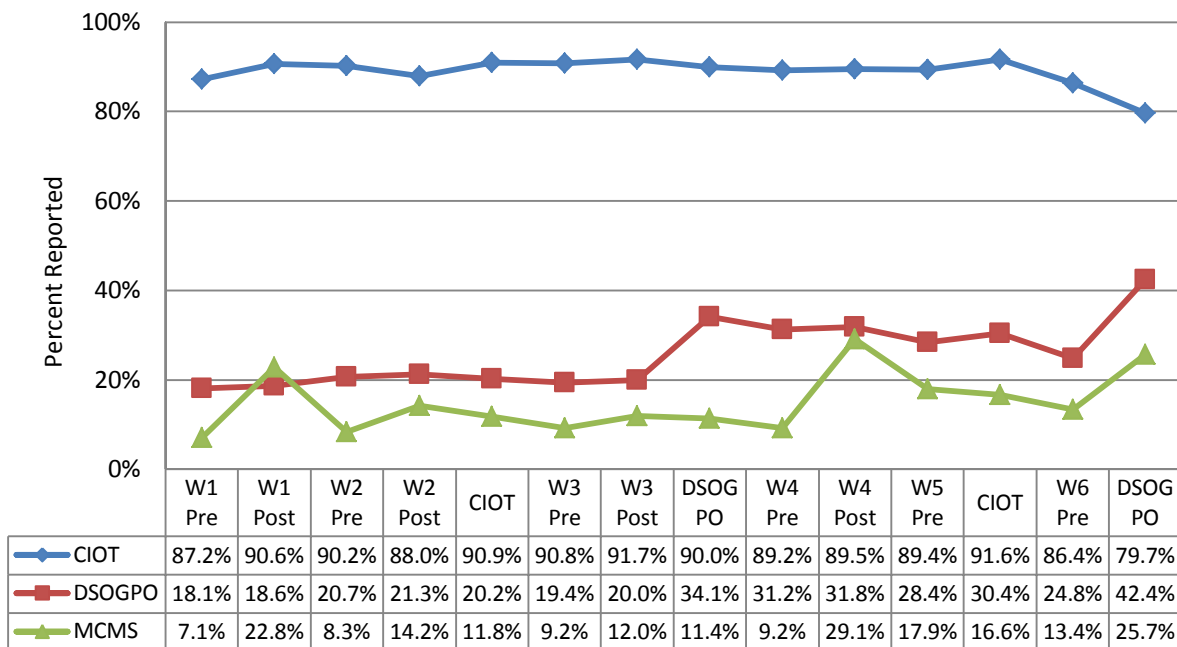


Figure 34. Recognition of the CIOT, DSOGPO, and MCMS Slogans in Tennessee

More Cops More Stops. Figure 35 shows recognition of the MCMS slogan in the general population and in the target group of young males. Recognition increased significantly with every MCMS phase where there was a pre-post survey (W1, W2, W3 and W4); the largest gain was associated with W4 [+20%; $\chi^2(1, N = 4,530) = 288.8, p < .05$], followed by W1 [+16%; $\chi^2(1, N = 3,978) = 196.4, p < .05$]; and then W2 (+6%; $\chi^2(1, N = 4,133) = 36.68, p < .05$).

Recognition was nearly always greater among young males than in the general population. This difference was significant at several points, including pre-W2 [+5%; $\chi^2(1, N = 2,634) = 35.3, p < .05$]; post-W4 [+4%; $\chi^2(1, N = 2,841) = 8.15, p < .05$]; and post-DSOGPO [+7.5%; $\chi^2(1, N = 2,350) = 10.49, p < .05$].

There were no significant changes in recognition of MCMS in the control area. Thus, there was little evidence of any media “bleed,” with regard to MCMS messaging.

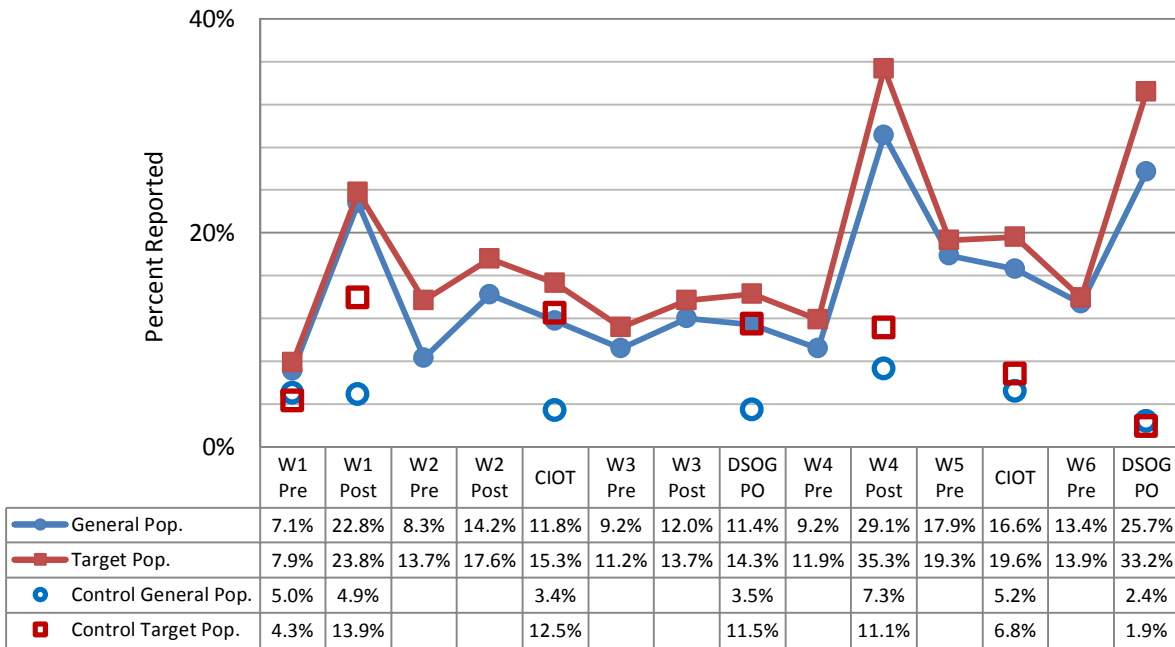


Figure 35. Recognition of the MCMS Slogan in Tennessee: General Versus Target Populations

Drive Sober or Get Pulled Over. As seen in Figure 36, recognition of the DSOGPO slogan increased significantly in the general population [$\chi^2 (1, N = 4,364) = 111.3, p < .05$] and among young males [$\chi^2 (1, N = 1,093) = 31, p < .05$] during DSOGPO in Year 1. Significant increases also occurred in the control area as would be expected in a statewide campaign. There was also a significant increase [$\chi^2 (1, N = 3,973) = 138.4, p < .05$] during DSOGPO in Year 2.

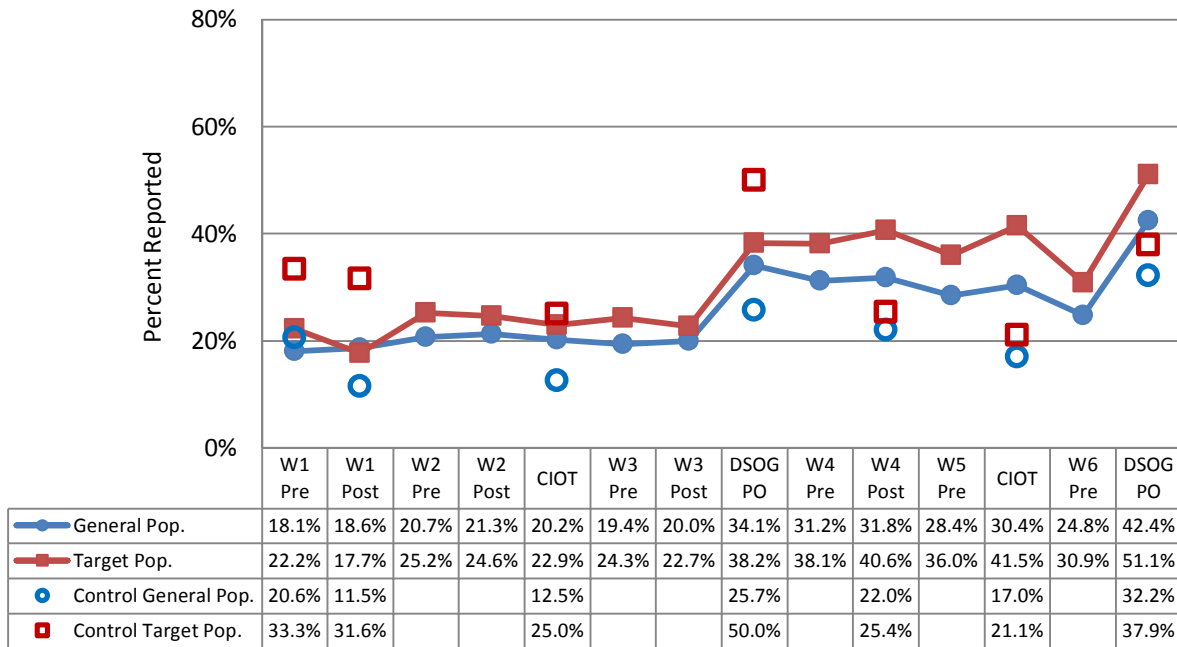


Figure 36. Recognition of the DSOGPO Slogan in Tennessee: General Versus Target; Program Versus Control

Click It or Ticket. As seen in Figure 37, recognition of the CIOT slogan was consistently high in both the general population and the target group throughout the two years of the program, but there was a significant decline in CIOT recognition during the final wave of the program. The decline associated with W6 was found in the general population and in the target group, in both the program and control areas. Prior to the decline at W6, there were significant increases associated with W1 [+3.4 points; $\chi^2(1, N = 3,978) = 11.11, p < .05$], CIOT in Year 1 [+2.9 points; $\chi^2(1, N = 4,385) = 10.1, p < .05$], and CIOT in Year 2 [+2.2 points; $\chi^2(1, N = 4,456) = 6.4, p < .05$]. During the early part of Year 2, CIOT recognition had been relatively flat in the program area while there were increases in the control area.

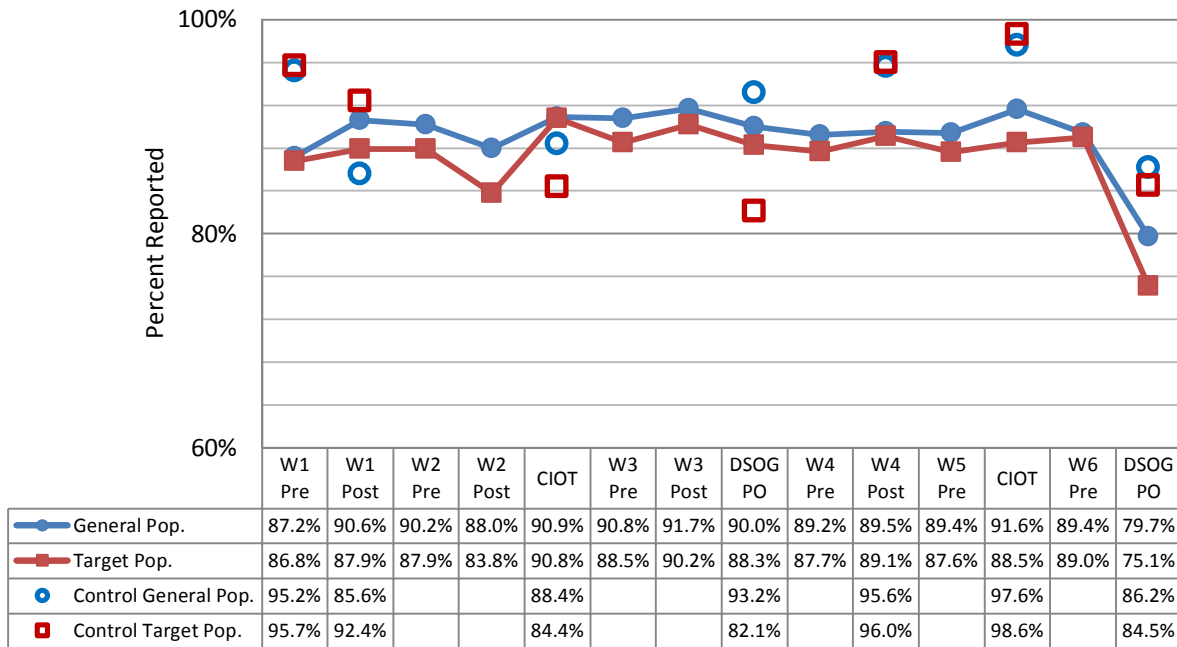


Figure 37. Recognition of the CIOT Slogan in Tennessee: General Versus Target; Program Versus Control

Awareness of Enforcement. Figure 38 shows the trends for awareness of enforcement in the general population. Nighttime seat belt enforcement was added to the original Key-3 measures (i.e., DUI, seat belt and speed enforcement). The program phase resulting in the largest average increase in enforcement awareness (i.e., sum of change in all enforcement categories divided by the number of categories) was CIOT in Year 1 where enforcement awareness increased by an average of 6.8 percentage points. There were significant increases in awareness in four of the five enforcement categories during this phase (all except speed); the largest increases were associated with seat belt (+11.7 pts, $p < 0.05$) and nighttime seat belt enforcement (+8.9 pts, $p < 0.05$).

The phase with the next greatest increase was DSOGPO in Year 1 with a 4.7-point average increase in awareness of enforcement. The average was driven primarily by increases in awareness of DUI (+6.5 points, $p < 0.001$) and speed enforcement (+5.4 points, $p < 0.001$).

Looking only at MCMS phases, the highest average change was associated with W4, which had an average increase of 5.4 points, and W2 with an average increase of 3.8 points. W1 had an average increase of 2.3 points.

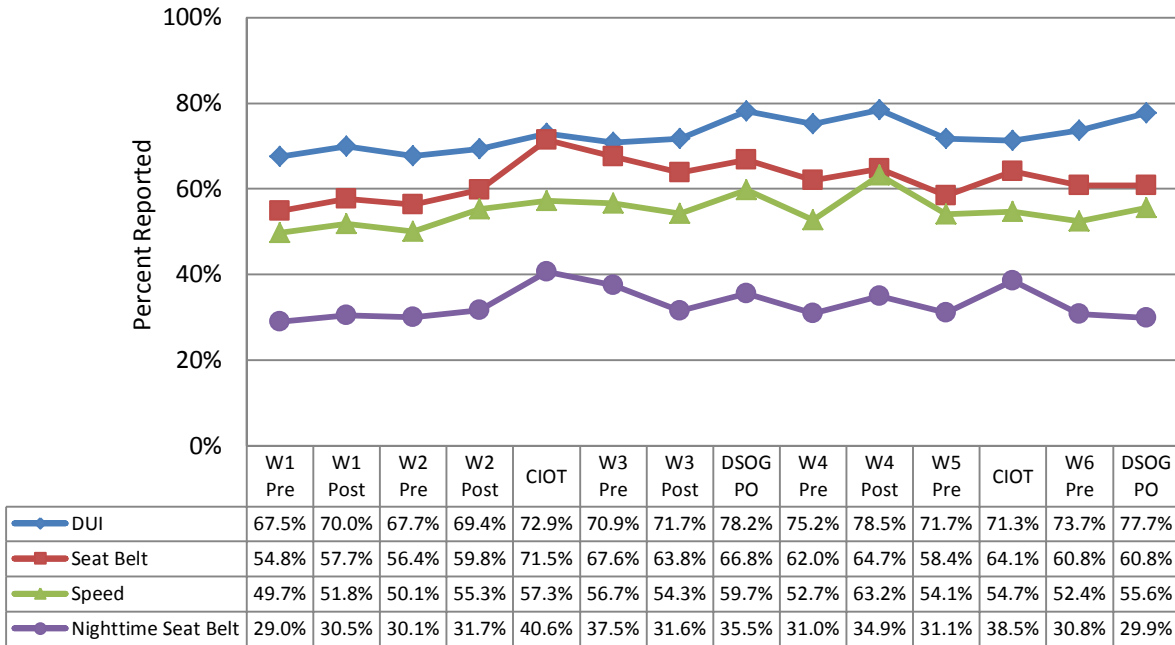


Figure 38. Awareness of Enforcement in Tennessee

Figures 39 and 40 display reported awareness of DUI, speed, seat belt, and nighttime seat belt enforcement in the program and control areas. The measurement points shown were those conducted in both the program and control areas. The reported levels of awareness were generally higher in the program than control areas.

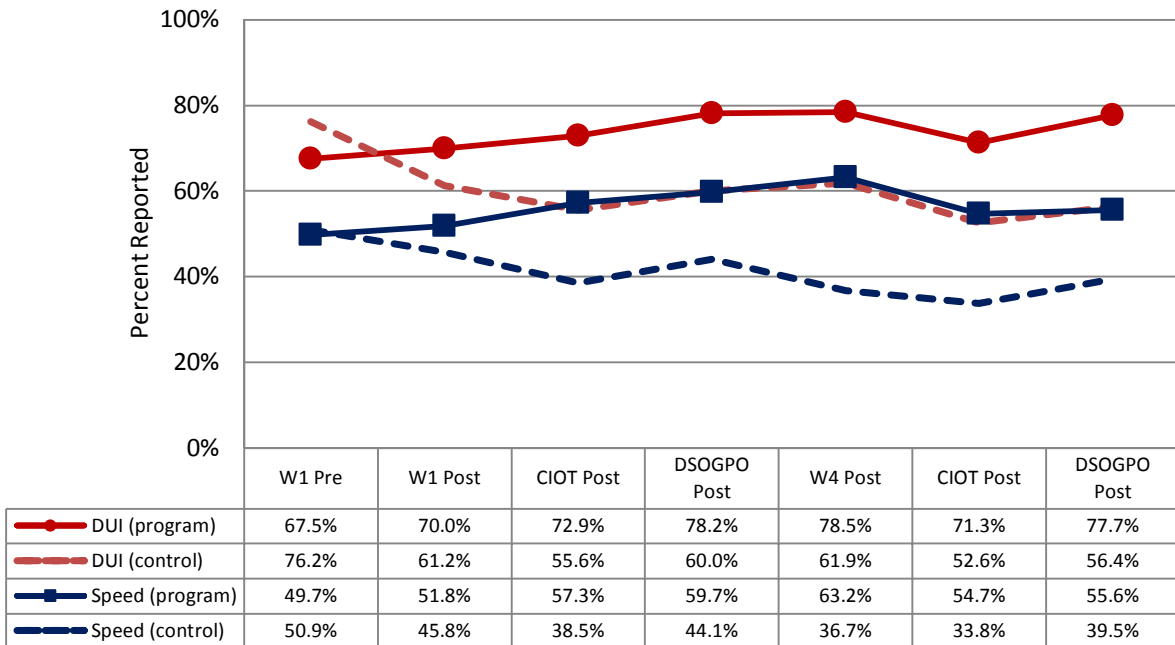


Figure 39. Awareness of DUI and Speed Enforcement in Tennessee Program and Control Areas

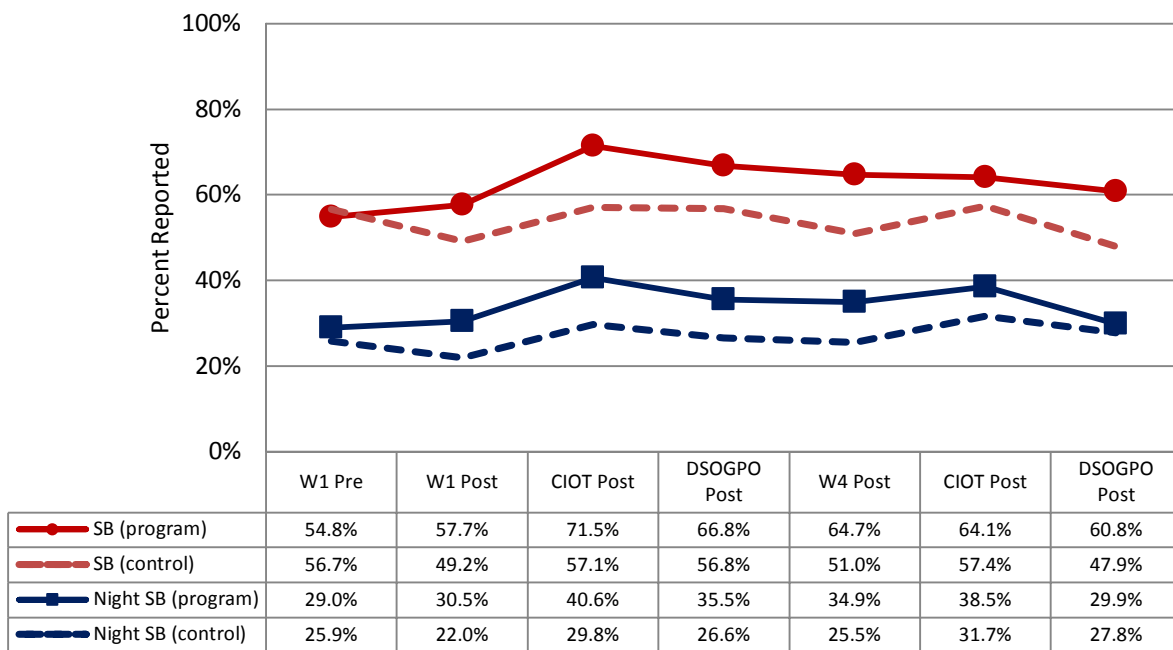


Figure 40. Awareness of Seat Belt and Nighttime Seat Belt Enforcement in Tennessee Program and Control Areas

General Traffic Enforcement. After the first wave of program activity, awareness of general traffic enforcement was added to the inventory of awareness variables. As seen in Figure 41, there were significant gains in awareness of general traffic enforcement associated with W2 [+7.3 points; $X^2(1, N = 4,106) = 22.1, p < .05$], CIOT in Year 1 [+8.1 points; $X^2(1, N = 4,361) = 28.8, p < .05$], W4 [+6.6 points; $X^2(1, N = 4,510) = 19.9, p < .05$] and the combined activity of W6 and DSOGPO in Year 2 [+7.1 points; $X^2(1, N = 3,963) = 19.93, p < .05$]. Awareness of general traffic enforcement was consistently and significantly higher in the program area than in the control area.

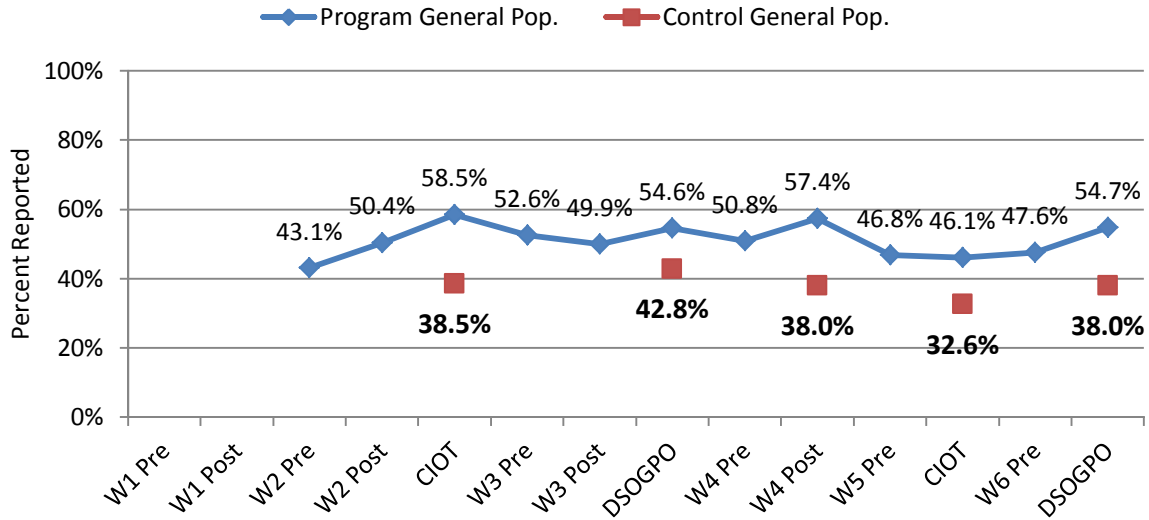


Figure 41. Awareness of “General Traffic Enforcement” in Tennessee: General Population; Program and Control Areas³

Sources of Enforcement Awareness. Questions in the DMV survey asked respondents where they heard about increased enforcement efforts. Figure 42 shows that television was the most frequently cited source of enforcement awareness among the general and target populations in Tennessee, followed by radio, and then the Internet. Television was less often mentioned by young males than by general population respondents. Mentions of television appeared to decline over time, while mentions of radio appeared to increase.

³This survey index was not included for W1. It was added for W2.

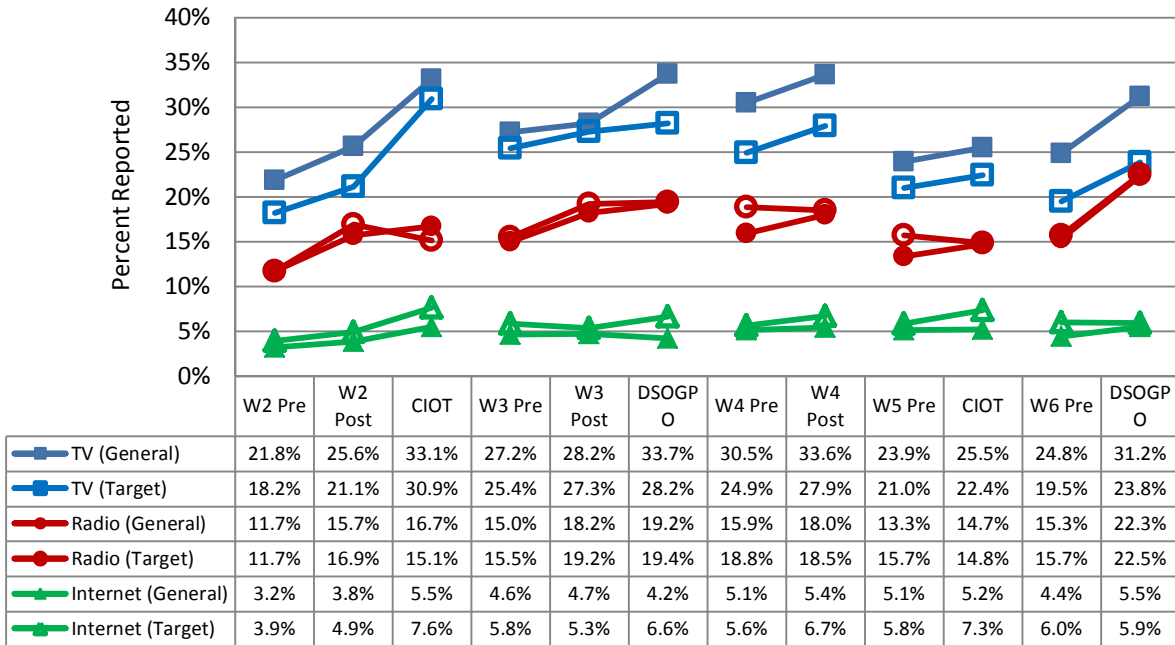


Figure 42. Reported Sources of Enforcement Awareness in Tennessee: General Population and Among Young Males

Perceived Risk of a Ticket or an Arrest. Questions in the DMV survey also asked how likely it would be to get a ticket or be arrested for driving unbuckled, speeding or driving after drinking. Response options included: very likely, somewhat likely, somewhat unlikely, very unlikely and don't know.

Perceived Risk by Violation Type and Population Group: As seen in Figure 43, an average of 65% of general population respondents and young males thought that driving after drinking would very likely result in an arrest. An average of 52% of the general population (and 48% of young males) said that speeding would very likely result in a ticket. An average of 39% of general population respondents (and 34% of young males) said that riding unbuckled would very likely result in a ticket.

The highest perceived risk was always associated with driving after drinking, followed by speeding, and then riding unbuckled, which was the same for each program phase and for both groups.

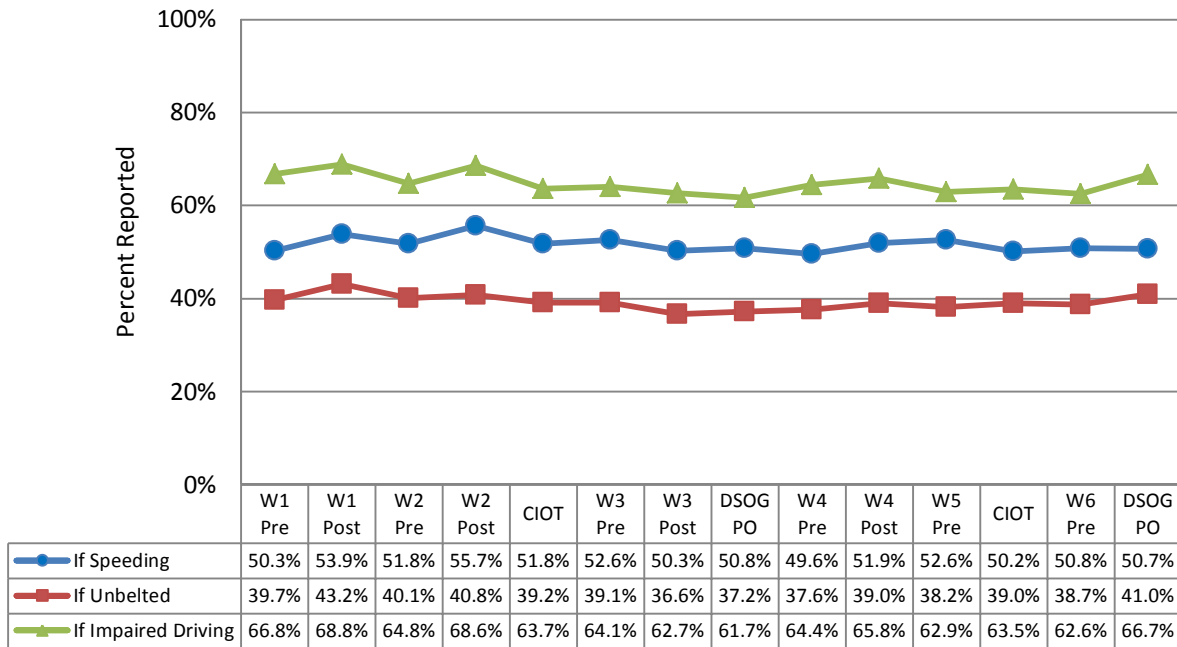


Figure 43. Perception That a Driver Would Be “Very Likely” to Be Ticketed or Arrested for a Traffic Safety Violation in the General Population in Tennessee

Change Associated With MCMS Phases. In the general population, W1 was associated with a 3.6 point increase in perceived risk for speeding [$\chi^2 (1, N = 3,922) = 5.2, p < .05$] and a 3.5 point increase for not buckling up [$\chi^2 (1, N = 3,936) = 4.95, p < .05$]. During W2, there was a 3.9 point increase for speeding [$\chi^2 (1, N = 4,064) = 6.43, p < .05$] and a 3.8 point increase for driving after drinking [$\chi^2 (1, N = 4,308) = 11.62, p < .05$]. There were no significant changes for W3 and W4.

Among young males, only the gains for not buckling up reached significance: W1 [+7.1 points; $\chi^2 (1, N = 997) = 5.52, p < .05$] and W2 [+7.0 points $\chi^2 (1, N = 1,055) = 5.61, p < .05$]. In addition, there was a significant increase in perceived risk associated with driving after drinking during W4 [+5.8 points; $\chi^2 (1, N = 1,108) = 4.16, p < .05$].

Overall Change in Perceived Risk. In spite of the several significant increases in perceived risk associated with MCMS W1 and W2, there were no statistically significant overall increases from baseline to the end of the program among the general or target population.

There were consistent and significant decreases in the perceived likelihood of a ticket or an arrest in the control area. In the general population, the significant declines were for speeding [-16.7 pts; $\chi^2 (1, N = 898) = 24.78, p < .05$], seat belt use [-16.0 pts; $\chi^2 (1, N = 1,055) = 5.61, p < .05$], and DUI [-21.5 pts; $\chi^2 (1, N = 902) = 45, p < .05$]. Among young males, the significant declines were for speeding, [-13.5 pts; $\chi^2 (1, N = 230) = 4.19, p < .05$] and driving after drinking, [-17.2 pts; $\chi^2 (1, N = 233) = 7.39, p < .05$].

OBSERVED SEAT BELT USE

Daytime and Nighttime Usage: in Program and Control Areas

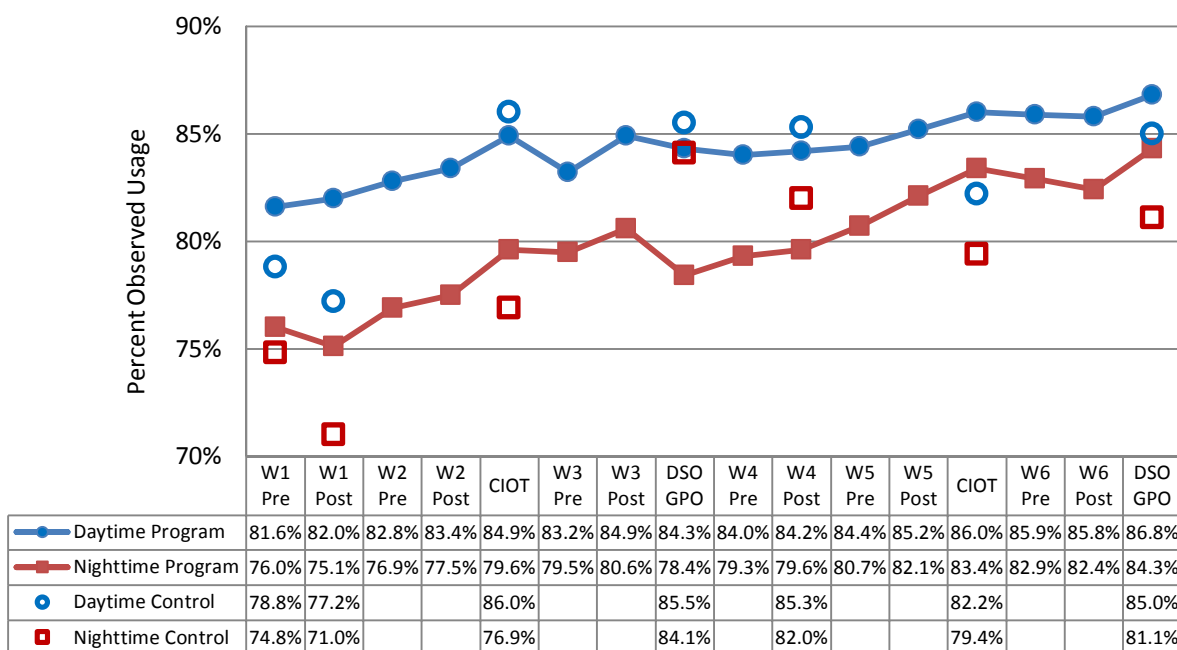


Figure 44. Observed Seat Belt Usage in Tennessee: Day and Night; Program and Control

Overall Trends. Figure 44 shows the 2-year trend for observed seat belt use. Daytime usage ended at 86.8% after the 2-year program period, 5.2 percentage points higher than its 81.6% baseline [$\chi^2(1, N = 44,326) = 225.2, p < .05$]. Nighttime usage increased by 8.3 points, from 76.0% to 84.3% [$\chi^2(1, N = 15,804) = 166.4, p < .05$].

Two of the six MCMS phases were associated with significant gains in daytime observed use. There was a 1.7 point gain associated with W3 [$\chi^2(1, N = 42,388) = 23.8, p < .05$] and a 0.8 point gain associated with W5 [$\chi^2(1, N = 39,640) = 4.45, p < .05$].

Daytime usage was initially lower in the control area than in the program area, but it increased during W2 and remained elevated throughout W3 and W4. Daytime usage in the control area then declined during W5 but increased again during W6. At the end of the program, daytime usage in the control area was 1.8 points lower than in the program area [$\chi^2(1, N = 28,394) = 15.5, p < .05$]. There was an overall 6.2 point gain in the control area, from 78.8% to 85.0% [$\chi^2(1, N = 15,333) = 99.7, p < .05$], one point greater than the gain in the program area (+5.2 points, from 81.6% to 86.8%). Although both gains were significant, the analysis indicated that the rate of gain (pre-to-post program) was greater in the control area than in the program area [Wald $\chi^2 df(1) = 31.38; p < .05$].

The largest gains in nighttime usage were associated with the combined activity of CIOT and the preceding W2 and W5 of MCMS activity. There was a 2.7 point gain associated with W2 and CIOT combined [$\chi^2 (1, N = 17,276) = 19.2, p < .05$] and a 2.7 point gain associated with W5 and CIOT combined [$\chi^2 (1, N = 14513) = 18.3, p < .05$]. A smaller, but significant 1.4 point gain was associated with W6 and DSOGPO combined [$\chi^2 (1, N = 15,942) = 5.18, p < .05$].

The only MCMS phase with a significant gain in observed nighttime use was W5 with a 1.4 point gain [$\chi^2 (1, N = 13,180) = 4.51, p < .05$]. However, CIOT in both Years and DSOGPO in Year 2 were associated with significant gains: +2.2 points associated with CIOT in Year 1 [$\chi^2 (1, N = 17,240) = 12.15, p < .05$], + 1.3 points associated with CIOT in Year 2 [$\chi^2 (1, N = 14,883) = 4.38, p < .05$], and +1.9 points associated with DSOGPO in Year 2 [$\chi^2 (1, N = 15,663) = 9.98, p < .05$].

Patterns of change for nighttime usage were similar in the program and control areas. But, there was more variation in the control area, with a decline during W1 (-1.6 points), followed by increases during W2 (+5.9) and W3 (+7.2). There were additional declines during W4 (-2.1) and W5 (-2.6) and then a modest increase during W6 (+1.4). The net gain in nighttime usage in the control area was 6.3 percentage points (from 74.8% to 81.1%) [$\chi^2 (1, N = 5,237) = 19.96, p < .05$], compared with an 8.3 point gain in the program area (from 76% to 84.3%).

Usage by DMA. There were substantial differences in usage rate levels and in rate changes in the three program area DMAs. Figure 45 shows the individual daytime usage rates for the three DMAs.

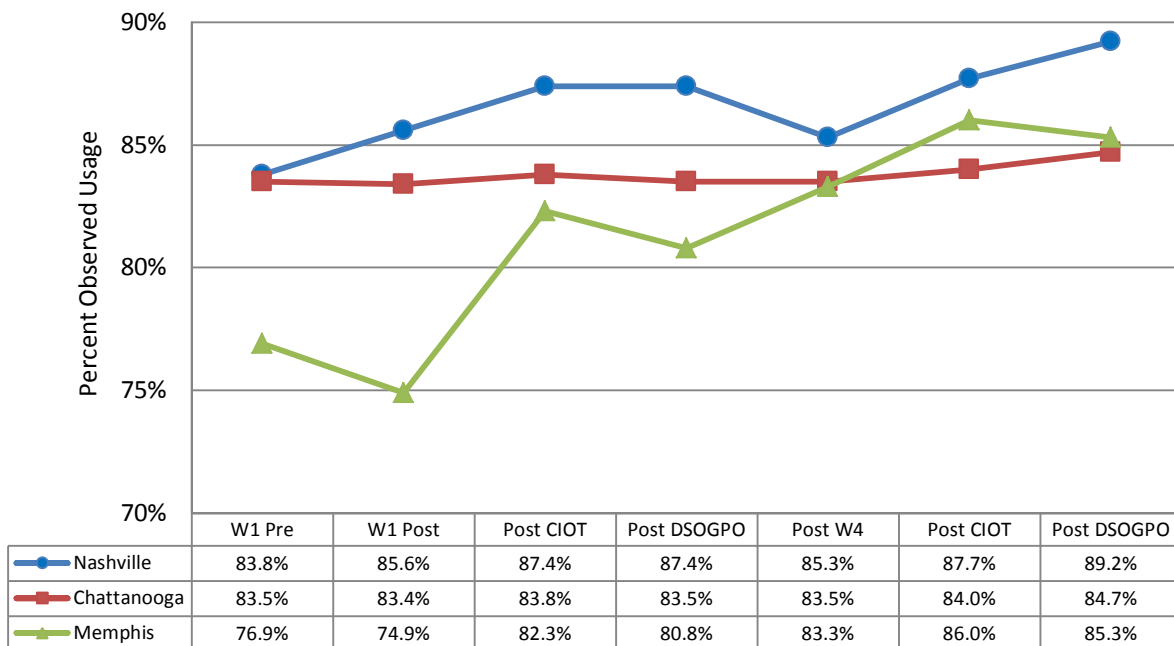


Figure 45. Daytime Seat Belt Usage in Tennessee’s Three Program DMAs

Daytime usage was significantly lower in Memphis than in the other two DMAs at the start of the program, but there were increases in Memphis contributed to a net gain of 8.4 points across the program period [$\chi^2 (1, N = 11,081) = 115.2, p < .05$]. In spite of substantially higher baseline rates, there also were significant net increases of 5.4 in Nashville [$\chi^2 (1, N = 18,030) = 114.1, p < .05$] and 1.2 in Chattanooga [$\chi^2 (1, N = 15,215) = 4.28, p < .05$].

Nighttime Usage by DMA. Figure 46 shows nighttime usage was lower in Memphis than in the other two DMAs at the start of the program. There was a net gain of 13.3 points in the Memphis nighttime observed usage rate [$\chi^2 (1, N = 4,183) = 85.98, p < .05$]. There was a significant net gain of 6.7 points in Nashville [$\chi^2 (1, N = 6,485) = 53.46, p < .05$]. Nighttime usage in Chattanooga increased significantly as well, from 80.3% to 83.3% [$\chi^2 (1, N = 5,249) = 9.50 p < .05$].

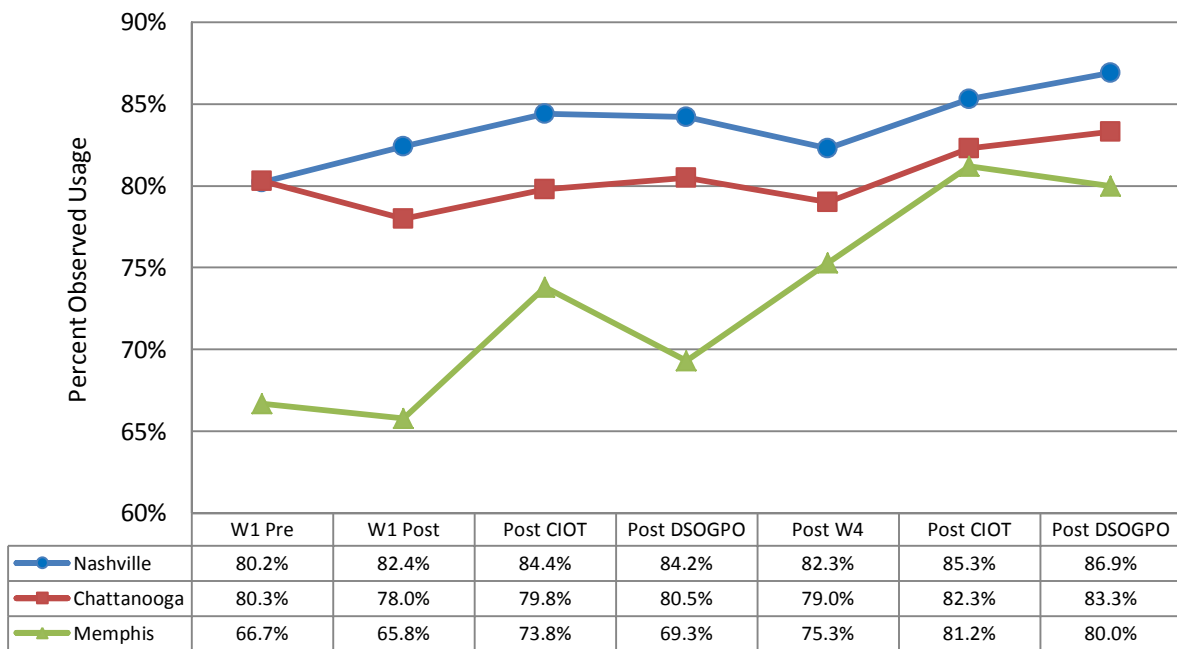


Figure 46. Nighttime Seat Belt Usage in the Three Tennessee Program DMAs

Relationships Between Program Activity and Usage. There were a number of moderate correlations between various activity variables and between such variables and observed seat belt usage (day and night). The following table summarizes the strongest correlations:

Table 7. Correlations between Usage and Key Activity Variables

Variable A	Variable B	r	n	t	p
Citations and Arrests	Daytime SBU	0.58	10	2.01	0.079
Citations and Arrests	Nighttime SBU	0.47	10	1.51	0.170
Citations and Arrests	Checkpoints	0.70	10	2.76	0.025
Citations and Arrests	News Stories	0.67	10	2.55	0.034
Checkpoints	Daytime SBU	0.73	10	3.03	0.016
Checkpoints	Nighttime SBU	0.79	10	3.61	< 0.001
Checkpoints	News Stories	0.67	10	2.55	0.034
News Stories	Daytime SBU	0.58	10	2.01	0.079
News Stories	Nighttime SBU	0.68	10	2.62	0.031

The activity variable that changed most from Years 1 to 2 was number of checkpoints, and it had the highest correlation with indices of daytime and nighttime usage. Looking at Tennessee overall, there was a positive correlation between nighttime seat belt use and the number of reported checkpoints ($r(8) = .79$, $p = .007$). This correlation was highest in the Memphis DMA ($r(6) = .86$, $p = .002$), but modest correlations were found in Nashville ($r(6) = .61$, $p = .11$) and in Chattanooga ($r(6) = .50$, $p = .21$). Figures 47 and 48 show the relationship between observed seat belt use during the daytime and nighttime and checkpoints in Memphis.

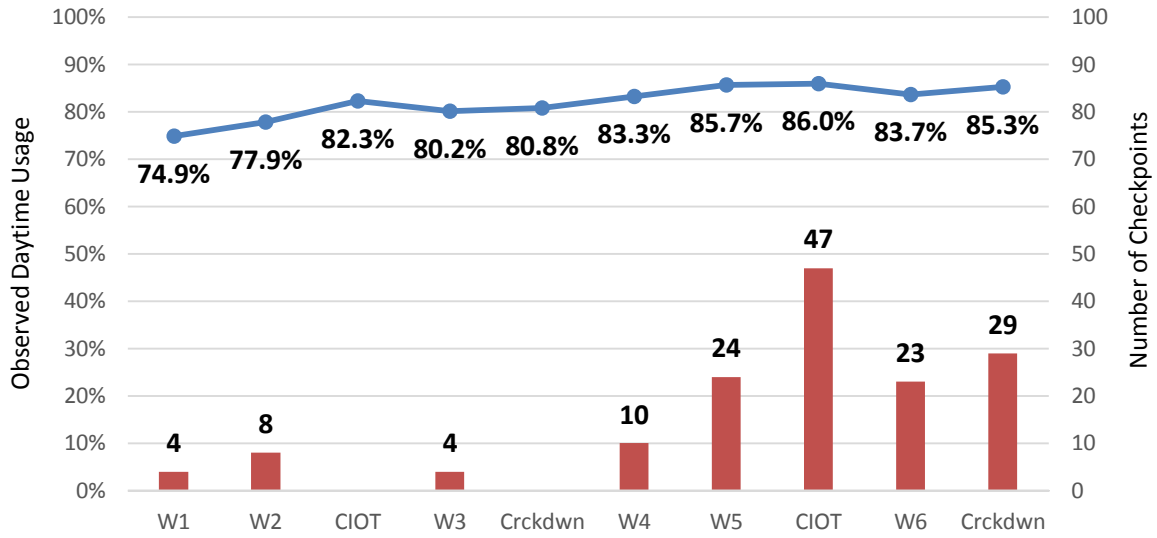


Figure 47. Daytime Seat Belt Use and Number of Checkpoints in Memphis

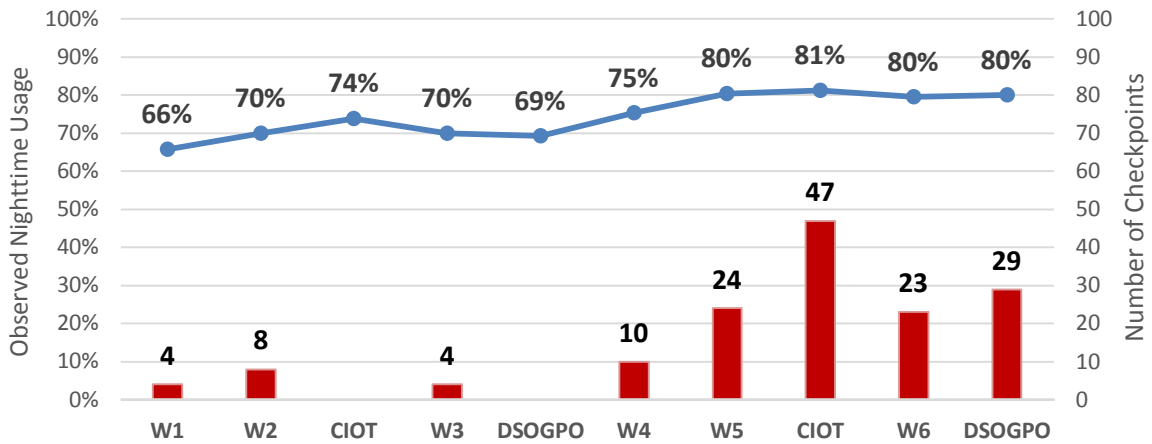


Figure 48. Nighttime Seat Belt Use and Number of Checkpoints in Memphis

BREATH ALCOHOL CONCENTRATION SURVEYS AT ROADSIDE

Memphis and Nashville (Combined)

Results for Drivers With Any Alcohol. Figure 49 shows the results of roadside BrAC surveys for the presence of alcohol (i.e., BrAC > .00 g/dL) among nighttime weekend drivers in the Memphis and Nashville DMAs combined. There was a significant two percentage point decline in the percentage of drivers with any positive BrAC, from baseline to the end of the program (-2.0 percentage points; $X^2(1, N = 2,545) = 4.38, p < 0.05$). Within this overall decline, there was a significant decline associated with W4, the first phase of program activity in Year 2 (-3.6 pts; $X^2(1, N = 2,545) = 16.22, p < 0.05$).

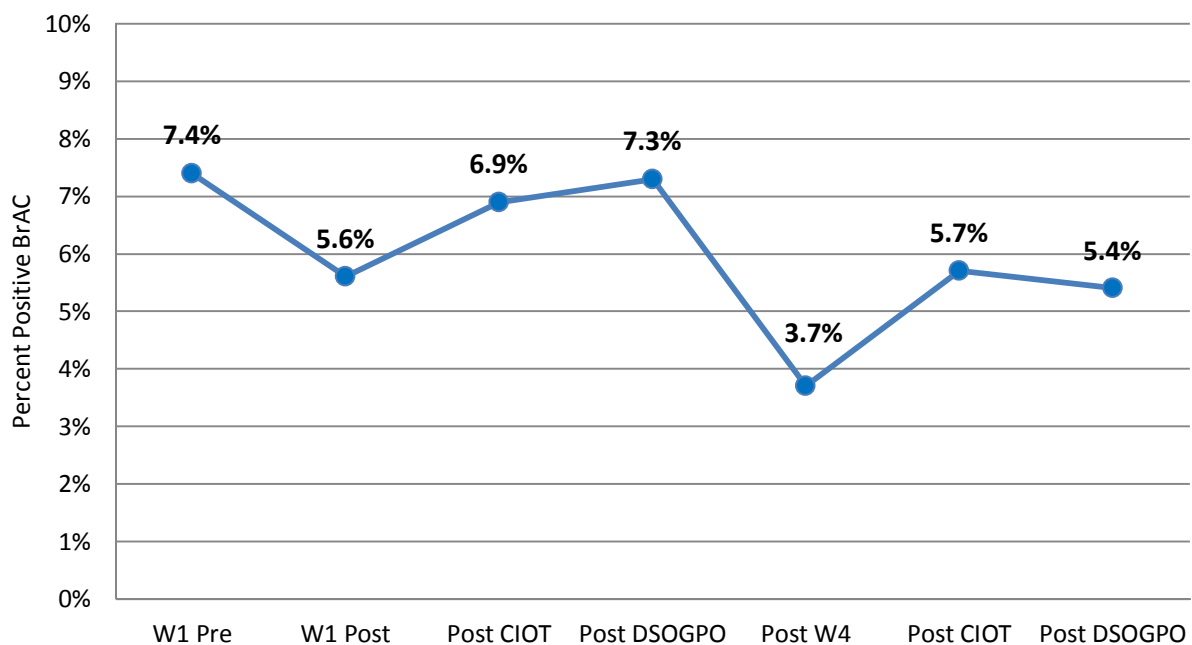


Figure 49. Percentage of Positive Driver BrAC in Memphis and Nashville

Results for Drivers With Higher Levels of Alcohol. As shown in Figure 50, examination of data for drivers with BrACs greater than or equal to .05 g/dL did not find a significant overall decline from baseline to the final survey. However, within that overall trend there were two significant declines associated with W1 (-1.2 pts; $X^2(1, N = 2,491) = 5.52, p < 0.05$) and W4 (-1.1 pts; $X^2(1, N = 2,545) = 5.92, p < 0.05$). There was no significant overall change in the proportion of drivers surveyed with BrACs greater than or equal to .08 g/dL.

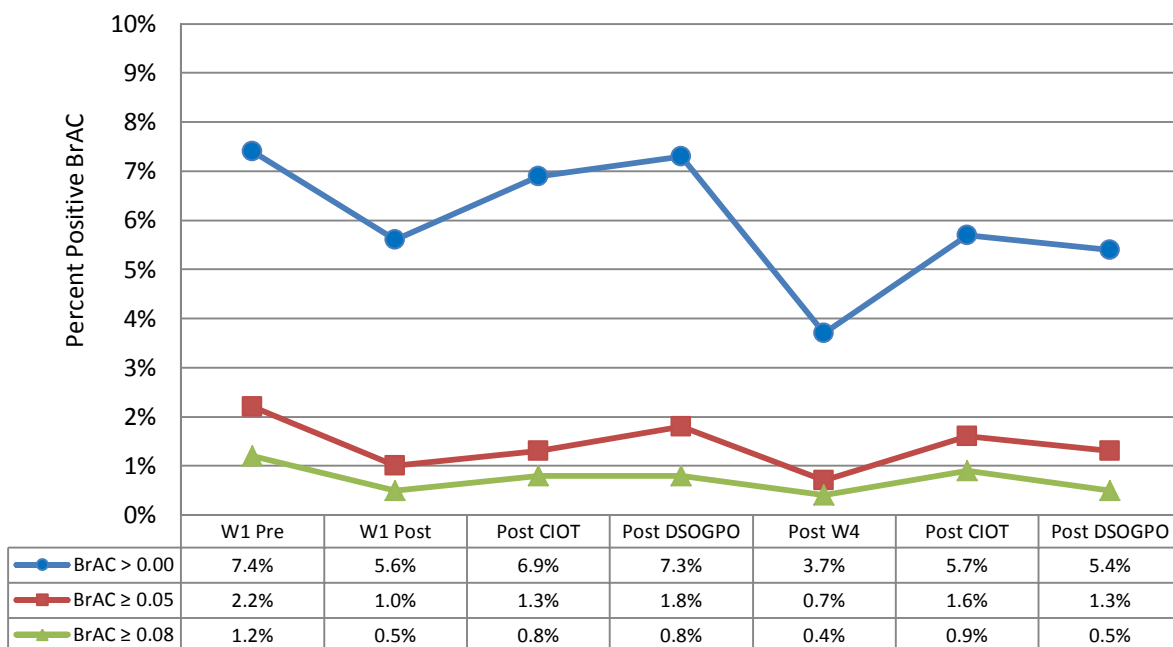


Figure 50. Percentage of Positive Driver BrAC by Alcohol Level in Memphis and Nashville

Memphis and Nashville Examined Individually

Results for Drivers With Any Alcohol by Site. Figures 51 and 52 show the proportion of drivers with positive BrACs (i.e., BrAC > .00 g/dL) at each measurement period in Nashville and Memphis, respectively. There was a significant decline in Nashville, from 8.5% to 5.4% (-3.0 pts; $X^2(1, N = 1,323) = 4.73, p < 0.05$). There was no significant decline measured in Memphis.

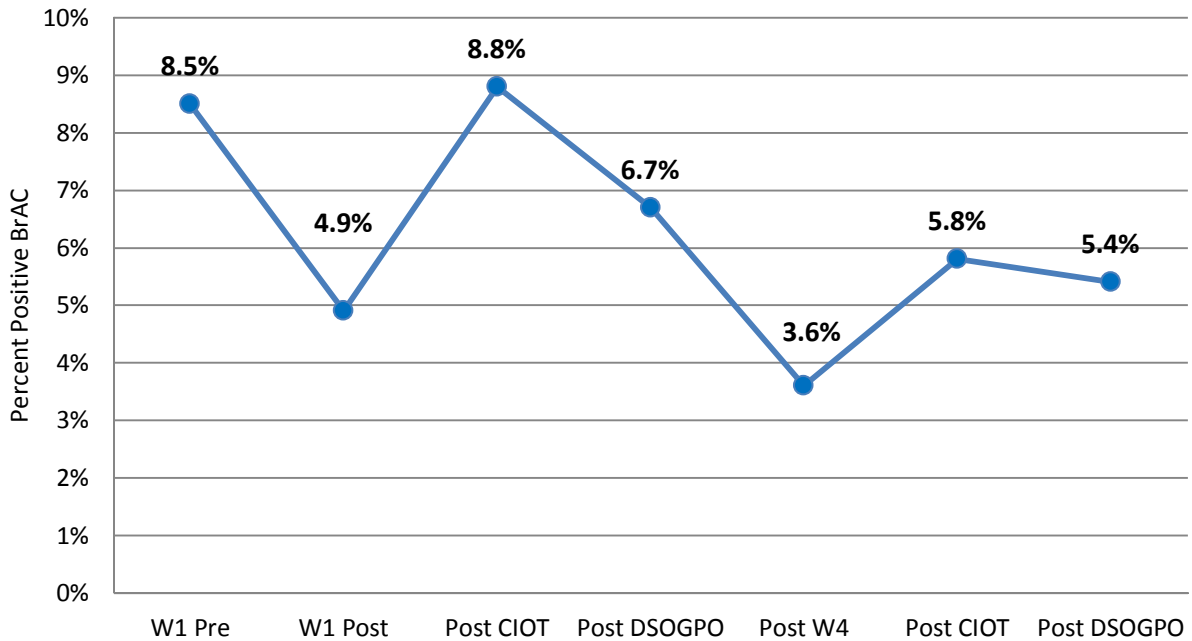


Figure 51. Percentage of Positive Driver BrAC in Nashville

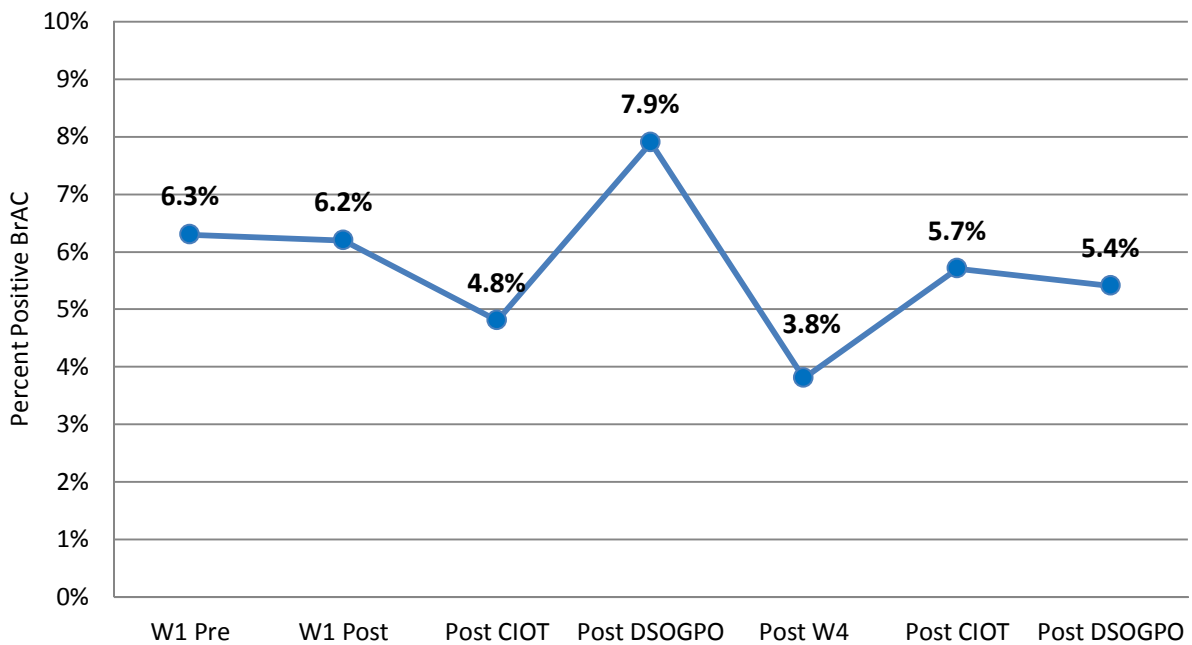


Figure 52. Percentage of Positive Driver BrAC in Memphis

Results for Drivers With Higher Levels of Alcohol by State. As seen in Figures 53 and 54, the patterns of measured changes for BrACs greater than or equal to .05 and .08 g/dL were similar to the patterns for BrACs greater than zero. However, the sample sizes were smaller for the higher levels and most of the measured changes did not reach significance at the .05 level.

One case where there was a significant change was in Nashville where there was a significant decline in the proportion of all drivers with BrACs $\geq .08$, from 1.5% at baseline to 0.6% at the final measurement (-0.9 pts; Fisher Exact Test (1, N = 1,323 = $p < 0.05$)). However, there was no significant decline in the proportion of drivers with a BrAC $\geq .05$. In Memphis, there were no significant declines in the proportions of drivers with BrACs greater than or equal to .05 and .08.

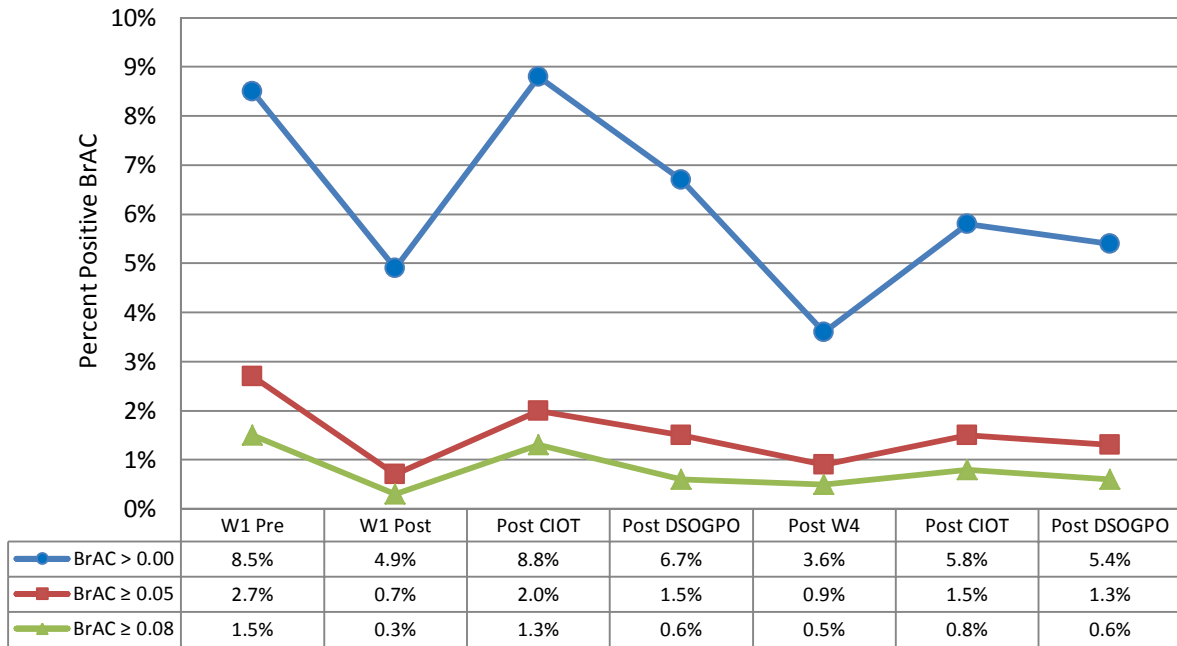


Figure 53. Driver With Positive BrAC by Alcohol Level at Roadside in Nashville

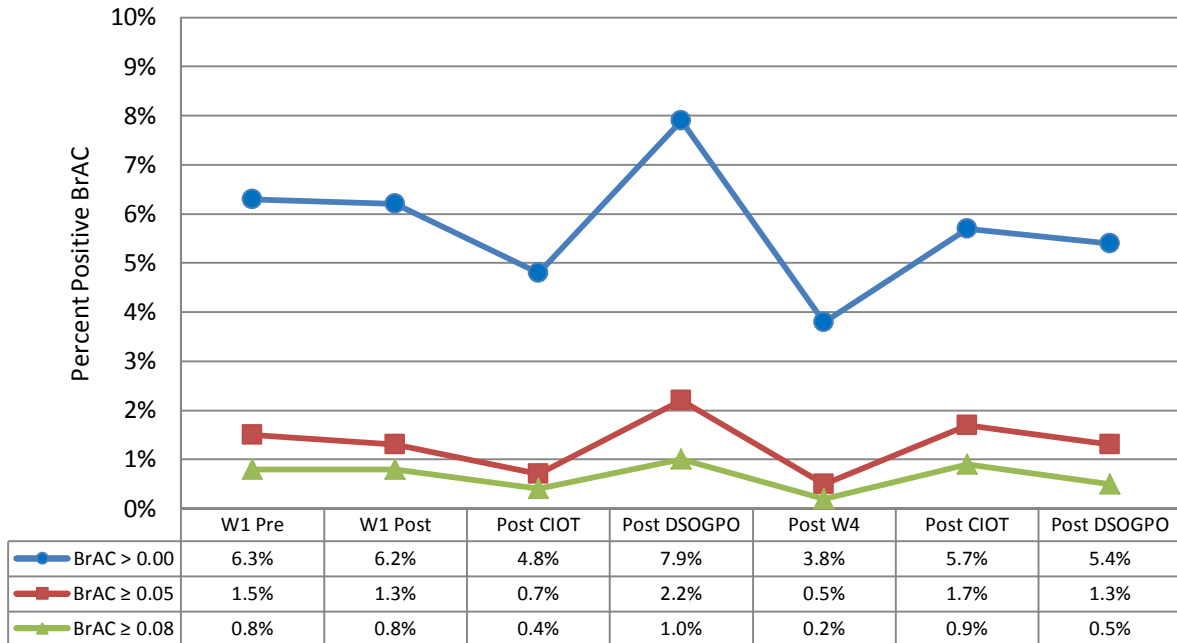


Figure 54. Driver With Positive BrAC by Alcohol Level at Roadside in Memphis

VII. LIMITATIONS

This was a large and complex study involving many factors including two States, five individual DMA program areas, and two control areas. There were six waves of activity (consisting of 10 distinct program phases) over a period of 2 years. Some of these activities (CIOT and DSOGPO) affected the entire State (both the general population and an age-related target population) and some of them (MCMS) were intended to affect only designated program areas. Further, messaging was designed to reach young male drivers, as well as the general population. Hundreds of law enforcement agencies were involved in these various program activities, and there were multiple inputs (i.e., paid and earned media, traditional and Internet-based). In addition, several severe weather episodes occurred during the program period, interfering with program implementation and measurement, making the program effort even more challenging.

This program benefitted from experience on the part of participating entities in terms of organizing, implementing and documenting program activity, as well as troubleshooting unforeseen problems. For example, during the first wave, the portal for reporting law enforcement activity data did not allow for reporting MCMS and CIOT activity data separately. The participating sites quickly found a solution to allow for independent reporting the next reporting period.

The evaluation also encountered times when post-wave awareness, seat belt and BrAC surveys could not be conducted immediately following the program activity. This reality of field research introduced the possibility of program outcome decay prior to measurement. In general, any delays were kept to a minimum, but there were some delays of up to one week.

The control site selection process faced challenges because the program area in each State consumed approximately two-thirds of their population. For Tennessee, there was less of a challenge because there were three large and regionally separated metropolitan areas with similar baseline rates of observed seat belt use, which worked well for the selection. However, in Oklahoma both Oklahoma City and Tulsa were part of the program area, not leaving a clear option for the control site. The Lawton DMA was chosen as the control. The baseline rate in the Lawton DMA turned out to be much lower than in the program areas. This factor may have biased the control area in favor of demonstrating greater change in observed seat belt usage. The baseline rates were lower in the control area than in the program area in Oklahoma for both daytime and nighttime seat belt observations. Specifically, for daytime seat belt observations, the baseline rate was 85.3% in the program area and 77.4% in the control area, respectively (7.9 percentage points lower in the control area). For nighttime seat belt observations, the baseline rate was 84.4% in the program area and 74.1% in the control area, respectively (10.3 percentage points lower).

The difference in baseline rates between the program and control area was smaller in Tennessee where the daytime baseline rate was 81.6% and 78.8% for the program and control area (i.e., 2.8 percentage points lower in control), and the nighttime baseline rate was 76% and 74.8% for the program and control area (i.e., 1.2 percentage points lower).

MCMS was designed to tackle alcohol-impaired driving, seat belt use and speeding. Ideally, this program evaluation would have been equipped to determine the effect of MCMS on all of these behaviors. However, it was not feasible or cost-effective to measure speeding behavior, and alcohol-impaired driving could only be measured for some waves and did not include a control. BrAC surveys were not originally part of the research design, but were later added in limited locations. BrAC surveys were only conducted in part of the Tennessee program area (i.e., Memphis and Nashville), and they were not conducted in the Tennessee control area or in Oklahoma.

Tennessee also included distracted driving in its paid media message. This component was not captured through the evaluation because it was added after the evaluation was designed.

In addition, to maximize the cost effectiveness of the design, post measurement of DMV and seat belt observation surveys were removed from the MCMS segments of W5 and W6. In addition, the control areas only had pre and post measurements for W1, after which there were only post measurements.

VIII. DISCUSSION

The overall results of this evaluation do not support the continued use of MCMS to enhance the impact of single-issue programs such as CIOT or DSOGPO. Although there was clear and consistent evidence that the MCMS components were associated with increases in recognition of the MCMS slogan, there is little evidence to support the hypothesis that the MCMS media and enforcement activity resulted in additional behavioral impact above and beyond that associated with statewide campaigns.

Program Activity. Reported media and enforcement for MCMS were relatively strong compared to the statewide single-issue campaigns.

Slogan Recognition. Respondents in both Oklahoma and Tennessee reported greatest awareness of the CIOT slogan, followed by DSOGPO and MCMS. Reported awareness of the MCMS slogan increased significantly for every MCMS activity period in both States. Increases in reported awareness of MCMS were not measured in the Tennessee control area. In Oklahoma, increases were measured in the control area, but they were smaller than those measured in the program area. These results provide little evidence of program media bleed in the control area. Reported awareness of the CIOT and DSOGPO slogans was highest for the statewide activity periods. Trends for awareness of CIOT and DSOGPO were similar in the program and control areas, likely a result of statewide exposure of these messages.

Awareness of Enforcement. Respondents in both Oklahoma and Tennessee reported greatest awareness of DUI enforcement, followed by seat belt, speed and nighttime belt. Reported awareness of enforcement was generally higher in the program area than in the control area in Tennessee; however, the statewide activity periods (CIOT and DSOGPO) were generally associated with greater increases than MCMS, suggesting the single message campaigns were associated with greater increases in awareness of specific types of enforcement. In Oklahoma, trends were similar in the program and control areas, indicating MCMS may not have increased awareness of specific types of enforcement above and beyond the influence of CIOT and DSOGPO. MCMS activity periods appeared to be associated with increased respondent awareness of general traffic enforcement in Tennessee. Respondents in Oklahoma reported similar awareness of general traffic enforcement in both the program and control areas.

Perceived Risk. There were no overall significant pre-to-post program increases in perceived risk of a ticket or an arrest. There were increases in perceived risk for some enforcement types during some waves, but the pattern was inconsistent.

Observed Seat Belt Usage. Although the overall program (i.e., MCMS plus statewide campaigns) appeared to have an impact on observed seat belt usage in all five program DMAs, there was little evidence that the MCMS phases had any additional impact, above and beyond that associated with the statewide campaigns. In every case, there also were significant increases in observed seat belt usage in control areas, which were exposed only to the statewide campaigns (CIOT and DSOGPO).

The strongest evidence of impact of the overall program (i.e., MCMS plus statewide campaigns) was found in Memphis, where there were strong and significant increases in both observed daytime and nighttime seat belt usage. Memphis showed the largest increase in nighttime usage (+13.3 points), which was greater than the increase in the control area (+6.3 points). There was clear evidence that the Oklahoma program was affected by two tornados that hit the Oklahoma City metropolitan area at the start of W5.

Measured Driver Alcohol Levels. There was a small but statistically significant decline in the percentage of drivers with positive BrACs ($> .00$) in the Nashville and Memphis DMAs combined, providing some evidence of overall program impact (i.e., MCMS plus statewide). These apparent declines were greatest for W4 in Year 2, when the reported use of checkpoints increased. There were no overall significant pre-to-post decreases in measured BrACs greater than or equal to $.05$ or $.08$. When looking specifically at Nashville, there were significant pre-to-post decreases in measured BrACs greater than or equal to $.00$ and $.08$. There were no significant declines measured in Memphis individually.

Checkpoints. One of the most positive findings was the substantial increase in checkpoints in Year 2 of the Tennessee program and the positive correlation between checkpoint activity and observed seat belt usage in Memphis. It is possible that the significant increases in observed nighttime seat belt usage in Tennessee and the significant decline in measured positive BrACs among drivers were related to the increase in reported checkpoint operations during Year 2 of the program. A related finding was the positive correlation between nighttime seat belt use and the number of reported checkpoints in Tennessee ($r(8) = .79, p = .007$), suggesting that the checkpoint efforts may have been related to the increase in nighttime seat belt use. This correlation was highest in the Memphis DMA ($r(6) = .86, p = .002$).

Impact on Young Males. There was some evidence that young males reported generally higher recognition of the MCMS slogan and the DSOGPO slogan when compared with the general population. This suggests that the targeted media efforts were effective in reaching young males.

IX. CONCLUSIONS

This evaluation provides little evidence to support the continued use of the *More Cops More Stops* (MCMS) program to enhance the *Click It or Ticket* (CIOT) and *Drive Sober or Get Pulled Over* (DSOGPO) statewide campaigns. While the evaluation did find some positive outcomes associated with the overall program (i.e., MCMS plus statewide), the evaluation found no evidence of MCMS being an effective tool for enhancing the effect of these statewide campaigns.

A large part of testing a new program concept is seeing how it works in action. Program tests are often full of discoveries regarding what works and what does not. For MCMS, a primary implementation finding was that the program's complex focus and proximity to the statewide campaigns contributed to enforcement fatigue. In practice, it appears to be a large effort for any law enforcement agency to simultaneously conduct high intensity alcohol-impaired driving, seat belt and speeding enforcement, immediately followed by CIOT and DSOGPO activities. This research appears to have confirmed the findings of Jones, Joksch, Lacey, Wiliszowski, and Marchetti (1995), providing further evidence that combined enforcement programs can be taxing on law enforcement.

Core to the combined messaging concept, this research helped test the influence of an overarching combined message on awareness of enforcement and on changes in behaviors. Other than some significant increases in awareness of general traffic enforcement associated with MCMS in Tennessee, other indices in the survey were less consistent and displayed similar trends in the program and control areas. The awareness survey found inconsistent results regarding awareness of specific types of enforcement, which suggests that the MCMS combined message may have been less successful at communicating that specific types of enforcement were taking place. When coupled with not finding improvement in observed seat belt use associated with the MCMS program, this research provides evidence to support the theory put forward by Jones, Joksch, Lacey, Wiliszowski, and Marchetti (1995) that combined messaging dilutes each individual message component.

With great appreciation of the many individuals in Oklahoma and Tennessee who worked hard to test MCMS, this research places the traffic safety community in a better position to make informed programming decisions. While the evaluation did find some positive outcomes associated with the overall program (i.e., MCMS plus statewide), the evaluation found no evidence of MCMS being an effective tool for enhancing the effect of the CIOT and DSOGPO statewide campaigns. Further, the MCMS combined concept appears to be taxing on law enforcement and to have limits in communicating specific traffic safety messages.

Reference

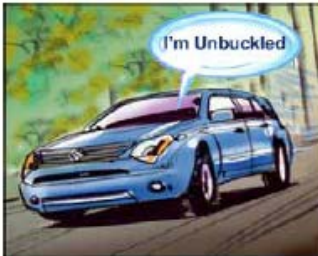
Jones, R., Joksch, H., Lacey, J., Wiliszowski, C., & Marchetti, L. (1995, March). Combined speed, alcohol, and safety belt enforcement strategies. (Report No. DOT HS 808 242). Washington, DC: National Highway Traffic Safety Administration. Available at <http://ntl.bts.gov/lib/25000/25900/25919/DOT-HS-808-242.pdf>

APPENDIX A - PUBLICITY

Television Advertisement Storyboard



"Bubbles"



Cars are driving around and we start to notice some of them have bubbles in words above them.

One reads "I'm unbuckled!"



Another one reads, "I'm driving drunk."



Another one hangs in the air a second then snaps to catch up with the motorcycle. It reads "I'm speeeeeding!"



We pull back to see a highway full of cars with bubbles above them.

continued...

Television Advertisement Storyboard – Continued



Cut to cars getting pulled over.

The bubbles above their cars pop as the cops talk to them.

SFX: "POP!"



VO: Hate to burst your bubble, but if you're not obeying the rules of the road we will see you. There's no way you can keep it to yourself.

Radio Advertisement Script



MORE COPS. MORE STOPS.

(Revvng engine, tires squealing)

Male voice: Uh, dude? You may want to slow down. There's a cop car up there?

Male voice: Hey man, there's another cop. I'd think about putting your seat belt on if I were you.

(Police car sirens)

Male voice: Ugh. And if you could sober up in less than five seconds, that'll be cool, too!

Announcer: Hey. People are trying to tell you something. Cops are everywhere. If you don't obey the rules of the road in Oklahoma, you will get caught. *More Cops. More Stops.* Paid for by the National Highway Traffic Safety Administration.

Sample Talking Points and Fact Sheet

MORE COPS. MORE STOPS.



More Cops. More Stops. Makes Driving in Oklahoma Safer

- In 2011, more than 500 passenger vehicle occupants died in traffic crashes in Oklahoma. Law enforcement is cracking down on the most basic and important highway safety laws across Oklahoma.
- Law enforcement will be highly visible, checking for seat belt violators, drunk drivers, those who speed and other traffic safety violations, April 19 through April 28, 2013.
- Previous enforcement waves for the *More Cops. More Stops* enforcement campaign have resulted in [XX] drunk driving arrests, [XX] seat belt citations, and [XX] speeding citations.
- Research shows that high-visibility enforcement works. With greater public awareness, we can save many lives.

Cracking Down on Drunk Driving

- Thirty-two percent of those killed in motor vehicle traffic crashes on Oklahoma's highways during 2011 involved drivers or motorcycle operators with a blood alcohol concentration (BAC) of .08 (the legal limit) or above at the time of the deadly crash.
- Teens and young adults are particularly at risk. In 2011, 44 percent of 18- to 34-year-olds killed in motor vehicle traffic crashes in Oklahoma involved a driver or motorcycle operator with a BAC of .08 or higher.

Wearing a Seat Belt Can Save Your Life

- Wearing a seat belt is the single most effective way to protect people in vehicle crashes.
- Nationally in 2011, there were more than 21,200 passenger vehicle occupants killed in motor vehicle crashes, and 52 percent were **NOT** wearing seat belts at the time of their fatal crashes.
- Over 500 passenger vehicle occupants were killed in Oklahoma motor vehicle traffic crashes in 2011, and 59 percent were **NOT** wearing seat belts at the time of their fatal crashes.
- Sixty-nine percent of teens and young adult passenger vehicle occupants (ages 18 to 34) who were killed in crashes in Oklahoma were **NOT** buckled up in 2011. These numbers are even more startling for nighttime crashes!
- In 2011, 10,135 passenger vehicle occupants in the U.S. were killed in motor vehicle traffic crashes at night (6 p.m. to 5:59 a.m.). Of those killed in nighttime crashes, 62 percent were NOT wearing seat belts (compared to 43% of occupants killed during daytime hours of 6 a.m. to 5:59 p.m.).
- Data further shows that 64 percent of people killed on Oklahoma's highways in passenger vehicles in nighttime (6 p.m. to 5:59 a.m.) crashes were not wearing seat belts.

Speeding

- In 2011, 31 percent of traffic fatalities in Oklahoma occurred in speeding-related crashes.

- Teens and young adults continue to practice risky behaviors on Oklahoma roadways. In 2011, 40 percent of the 18- to 34-year-olds who were killed in Oklahoma motor vehicle traffic crashes were involved in speeding-related crashes.

** According to the National Highway Traffic Safety Administration.
All numbers and percentages referencing belted or unbelted fatalities are based on "Known Usage."*

Sample PRE News Release



MORE COPS. MORE STOPS.

FOR IMMEDIATE RELEASE: [Date]

CONTACT: [Name, Phone, E-mail]

[Note: Before filling in the names of the organization and organization spokesperson(s), you MUST contact them to obtain their permission to use their names in this press release. You must also get their permission for the language used in their quotes, and any changes or additions they may require must be made before distribution of the release.]

[Law Enforcement Organization] Ramps Up Enforcement of Traffic Laws With *More Cops. More Stops.*

[CITY], Okla. – In an effort to save lives on Oklahoma’s roadways, [Local Law Enforcement Organization] will be out in force from April 19-28, 2013, to turn up the heat on dangerous traffic safety violations like driving without a seat belt, drunk driving, and speeding.

Breaking basic traffic safety laws has deadly consequences. In 2011, over 500 passenger vehicle occupants died in traffic crashes in Oklahoma, and the statistics are harrowing—fifty-nine percent were **NOT** wearing seat belts at the time of the crash; thirty-one percent of Oklahoma’s fatalities occurred in speeding-related crashes; and thirty-two percent involved drivers with a blood alcohol concentration (BAC) of .08 (the legal limit) or higher at the time of the crash.

Teens and young adults are especially at risk of traffic tragedies. In 2011, forty-four percent of 18 to 34 year-olds killed in Oklahoma traffic crashes involved a drunk driver. Sixty-nine percent who were killed in crashes in 2011 were **NOT** wearing seat belts at the time of the crash.

Nighttime is a particularly dangerous time. Sixty-four percent of people killed in Oklahoma traffic crashes at night (6 p.m. to 5:59 a.m.) were **NOT** wearing their seat belts. In [CITY/County], [CITY/County nighttime unbelted fatality numbers] unbelted passenger vehicle occupants died at night.

“These numbers are unacceptable. People need to think before acting carelessly or endangering themselves or those around them, and the high visibility of the *More Cops. More Stops.* combined enforcement campaign aims at doing just that,” said [Law Enforcement Official]. “Violations of Oklahoma’s most basic traffic safety laws can be deadly, and we’re going to continue to crack down on drivers who demonstrate risky behaviors, to help prevent crashes and save lives on our roadways.”

Oklahoma law enforcement has teamed with the U.S. Department of Transportation’s National Highway Traffic Safety Administration on *More Cops. More Stops.* to test the effectiveness of a combined highway safety law enforcement campaign. For more information on the *More Cops. More Stops.* campaign, please visit www.trafficsafetymarketing.gov [or local website].

Sample POST News Release

MORE COPS. MORE STOPS.

FOR IMMEDIATE RELEASE: [Date]

CONTACT: [Name, Phone, E-mail]

[Note: Before filling in the names of the organization and organization spokesperson(s), you MUST contact them to obtain their permission to use their names in this press release. You must also get their permission for the language used in their quotes, and any changes or additions they may require must be made before distribution of the release.]



Results Are In: *More Cops. More Stops.* Cracks Down on Traffic Safety Violations in Oklahoma

[CITY], Okla. – Local and state law enforcement officials have released the results of the most recent installment of *More Cops. More Stops.*, a campaign to crack down on violations of Oklahoma’s life-saving traffic safety laws.

[Law Enforcement Organization] announced today that they arrested [XX] drunk drivers, and issued [XX] seat belt citations and [XX] speeding citations during the fifth *More Cops. More Stops.* high-visibility enforcement period.

[Local Law Enforcement Official] said, “Ensuring safety on the roads is our duty, but we also want to make people aware of the impacts that risky behaviors and dangerous practices can have on their lives or the lives of those around them. The consequences could be legal or even deadly.”

In Oklahoma in 2011, over 500 passenger vehicle occupants were killed in traffic crashes—and fifty-nine percent were **NOT** wearing a seat belt at the time of the crash; thirty-two percent of Oklahoma’s fatalities were in a crash that involved a driver or motorcycle operator who had a blood alcohol content (BAC) at or above the legal limit at the time of the crash; and thirty-one percent occurred in a speeding-related crash.

Oklahoma’s teens and young adults (ages 18-34) are especially at risk of traffic tragedies. Of the teens and young adults ages 18 to 34 killed in Oklahoma crashes in 2011, sixty-nine percent were **NOT** wearing seatbelts at the time of the crash; forty-four percent died in a crash that involved a drunk driver; and forty percent were involved in speeding-related crashes.

The statistics are unacceptable. “We know *More Cops. More Stops.* can help us reduce fatalities on Oklahoma’s roadways, so we turned up the heat on those who drove drunk, didn’t wear a seat belt, and were speeding,” said [Law Enforcement Official.]

[Law Enforcement Organization] will hold the final enforcement push for the *More Cops. More Stops.* campaign from July 26 to August 4, in an effort to save even more lives on Oklahoma's roadways.

Oklahoma law enforcement teamed with the U.S. Department of Transportation's National Highway Traffic Safety Administration on the *More Cops. More Stops.* campaign to test the effectiveness of a high-visibility combined enforcement campaign in saving more lives on Oklahoma's roadways. For more information on the *More Cops. More Stops* campaign, please visit www.trafficsafetymarketing.gov [or local website].

APPENDIX B – Program and Evaluation Schedules

**Paid Media and Enforcement Activity Periods;
Seat Belt, Awareness; and BrAC Survey Schedules**

Table B-1: Advertisement Periods in Oklahoma

Year 1: Nov/2011 - Sep/2012				
Wave 1	Wave 2		Wave 3	
W1	W2	CIOT	W3	DSOGPO
11/14 - 11/27 Mon - Sun (2 weeks)	4/17 - 4/20 Tues - Fri (4 days) 4/24 - 4/26 Tues - Thurs (3 days)	5/14 - 5/28 Mon to Mon (15 days)	7/24 - 7/27 Tues - Fri (4 days) 7/31 - 8/02 Tues - Thurs (3 days)	8/15 - 9/03 Wed - Mon (20 days)
Year 2: Nov/2012 - Sept/2013				
Wave 4	Wave 5		Wave 6	
W4	W5	CIOT	W6	DSOGPO
11/12 - 11/25 Mon to Sun (2 weeks)	4/16 - 4/19 Tues - Fri (4 days) 4/23 - 4/25 Tues - Thurs (3 days)	5/13 - 5/27 Mon to Mon (15 days)	7/23 - 7/26 Tues - Fri (4 days) 7/30 - 8/01 Tues - Thurs (3 days)	8/14 - 9/02 Wed - Mon (20 days)

Table B-2: Enforcement Periods in Oklahoma

Year 1: Nov/2011 - Sep/2012				
Wave 1	Wave 2		Wave 3	
W1	W2	CIOT	W3	DSOGPO
11/18 - 11/27 Fri - Sun (10 days)	4/20 - 4/29 Fri - Sun (10 days)	5/21 - 6/03 Mon-Sun (2 weeks)	7/27 - 8/05 Fri - Sun (10 days)	8/17 - 9/03 Fri - Mon (18 days)
Year 2: Nov/2012 - Sept/2013				
Wave 4	Wave 5		Wave 6	
W4	W5	CIOT	W6	DSOGPO
11/16 - 11/25 Fri - Sun (10 days)	4/19 - 4/28 Fri - Sun (10 days)	5/20 - 6/02 Mon to Sun (2 weeks)	7/26 - 8/04 Fri - Sun (10 days)	8/16 - 9/02 Fri - Mon (18 days)

Table B-3: Advertisement Periods in Tennessee

Year 1: Nov/2011 - Sep/2012				
Wave 1	Wave 2		Wave 3	
W1	W2	CIOT	W3	DSOGPO
11/14 - 11/27 Mon – Sun (2 weeks)	4/10- 4/13 Tues - Fri (4 days) 4/17 - 4/19 Tues - Thurs (3 days)	5/14 - 5/28 Mon to Mon (15 days)	7/17 - 7/20 Tues - Fri (4 days) 7/24 - 7/26 Tues - Thurs (3 days)	8/15 - 9/03 Wed - Mon (20 days)
Year 2: Jan/2013- Sept. 2013				
Wave 4	Wave 5		Wave 6	
W4	W5	CIOT	W6	DSOGPO
1/21 - 2/03 Mon to Sun (2 weeks)	4/09 - 4/12 Tues - Fri (4 days) 4/16 - 4/18 Tues - Thurs (3 days)	5/13 - 5/27 Mon to Mon (15 days)	7/16 - 7/19 Tues - Fri (4 days) 7/23 - 7/25 Tues - Thurs (3 days)	8/14 - 9/02 Wed - Mon (20 days)

Table B-4: Enforcement Periods in Tennessee

Year 1: Nov/2011 - Sep/2012				
Wave 1	Wave 2		Wave 3	
W1	W2	CIOT	W3	DSOGPO
11/18 - 11/27 Fri - Sun (10 days)	4/12 - 4/15 Thurs - Sun (4 days) 4/19 - 4/22 Thurs - Sun (4 days)	5/21 - 6/03 Mon - Sun (2 weeks)	7/19 - 7/22 Thurs - Sun (4 days) 7/26 - 7/29 Thurs - Sun (4 days)	8/17 - 9/03 Fri - Mon (18 days)
Year 2: Jan/2013 - Sept/2013				
Wave 4	Wave 5		Wave 6	
W4	W5	CIOT	W6	DSOGPO
1/25 - 2/03 Fri - Sun (10 days)	4/12- 4/15 Fri - Mon (4 days) 4/19 - 4/22 Fri - Mon (4 days)	5/20 - 6/02 Mon to Sun (2 weeks)	7/18 - 7/21 Thurs - Sun (4 days) 7/25 - 7/28 Thurs - Sun (4 days)	8/16 - 9/02 Fri - Mon (18 days)

Table B-5: Data Collection Schedules in Oklahoma and Tennessee Program Areas

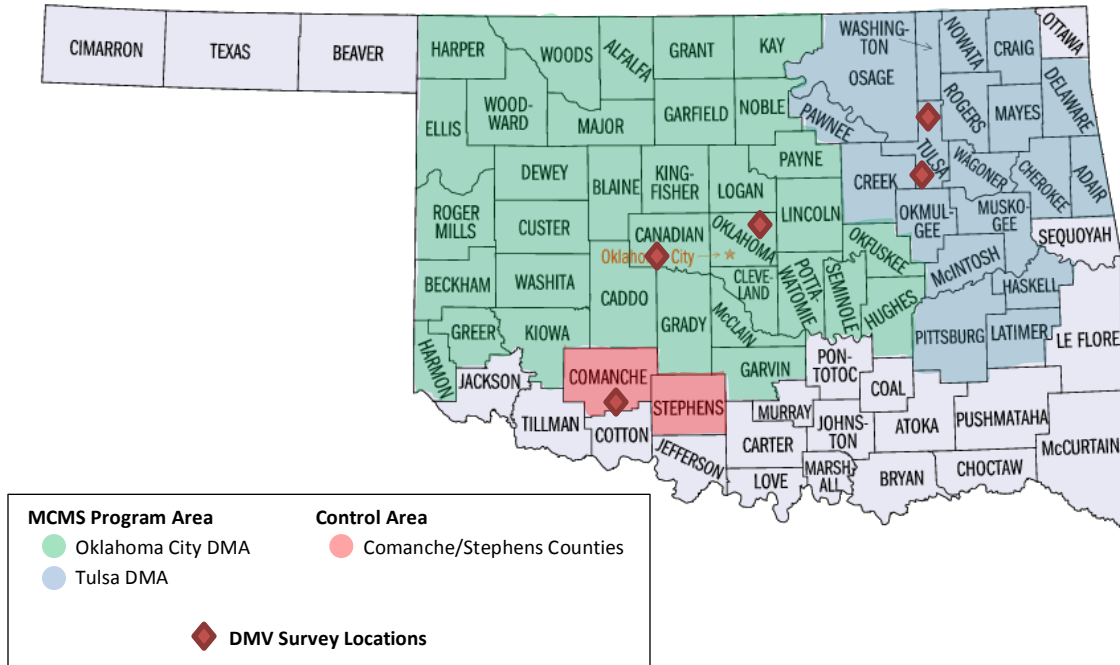
Year 1: Nov/2011 - Sep/2012					
Data Collected	Wave 1	Wave 2		Wave 3	
	W1	W2	CIOT	W3	DSOGPO
SBU (Day/Night)	Pre/Post	Pre/Post	Post	Pre/Post	Post
Awareness (DMV)	Pre/Post	Pre/Post	Post	Pre/Post	Post
BrAC (TN only)	Pre/Post	-	Post	-	Post
Year 2: Nov/2012- Sept/2013					
Data Collected	Wave 4	Wave 5		Wave 6	
	W4	W5	CIOT	W6	DSOGPO
SBU (Day/Night)	Pre/Post	Pre/Post	Post	Pre/Post	Post
Awareness (DMV)	Pre/Post	Pre	Post	Pre	Post
BrAC (TN only)	Post	-	Post	-	Post

Table B-6: Data Collection Schedules in Control Areas

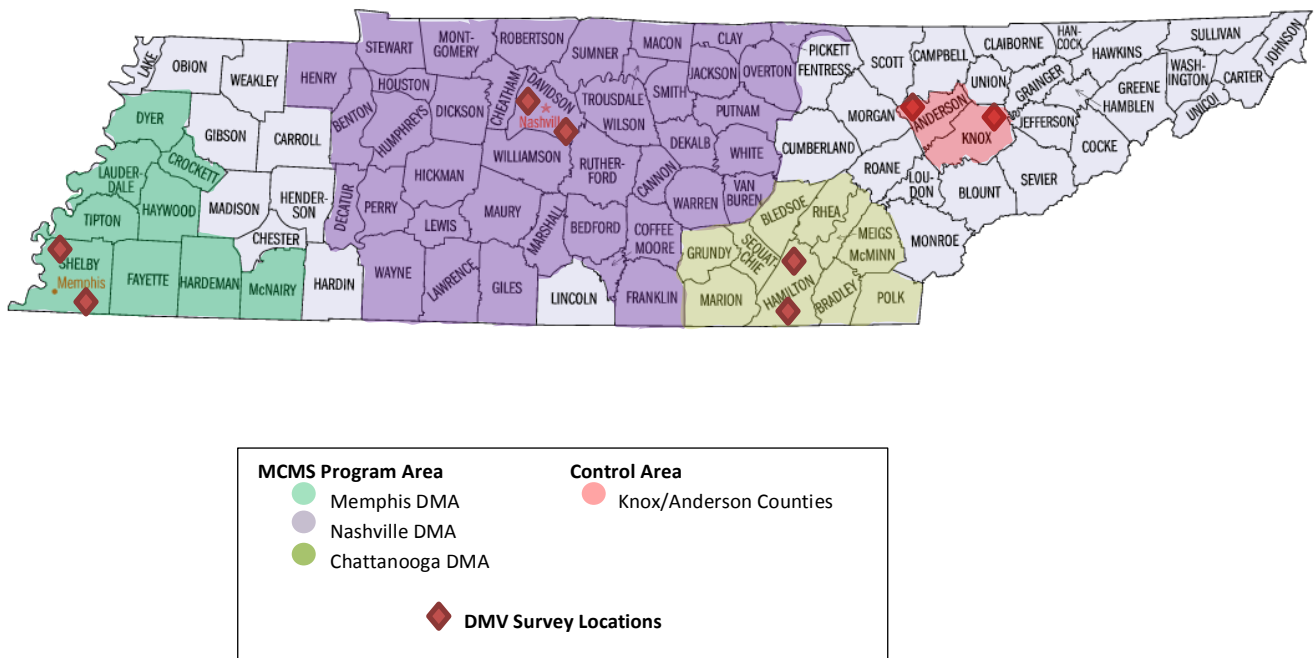
Year 1: Nov/2011 - Sep/2012					
Data Collected	Wave 1	Wave 2		Wave 3	
	W1	W2	CIOT	W3	DSOGPO
SBU (Day/Night)	Pre/Post	-	Post	-	Post
Awareness (DMV)	Pre/Post	-	Post	-	Post
BrAC (TN only)	-	-	-	-	-
Year 2: Nov/2012- Sept/2013					
Data Collected	Wave 4	Wave 5		Wave 6	
	W4	W5	CIOT	W6	DSOGPO
SBU (Day/Night)	Post	-	Post	-	Post
Awareness (DMV)	Post	-	Post	-	Post
BrAC (TN only)	-	-	-	-	-

APPENDIX C – AWARENESS SURVEY

Oklahoma DMV Office Locations



Tennessee DMV Office Locations



Department of Motor Vehicle Survey Locations

OKLAHOMA DMV SURVEY LOCATIONS

Yukon DMV (Oklahoma City DMA)

334 Elm St.

Oklahoma City, OK

Oklahoma City DMV (Oklahoma City DMA)

2480 W I-240

Oklahoma City, OK

Tulsa DMV (Tulsa DMA)

14002 E 21st Street, Suite A

Tulsa, OK

Lawton DMV (Control)

705 E. Gore

Lawton, OK

TENNESSEE DMV SURVEY LOCATIONS

Memphis DMV (Memphis DMA)

6340 Summer Ave.

Memphis, TN 38134

Memphis DMV (Memphis DMA)

3040 Walnut Grove

Memphis, TN 38103

Nashville DMV (Nashville DMA)

624 Hart Lane

Nashville, TN 37216

Nashville DMV (Nashville DMA)

6604 Centennial Blvd

Nashville, TN 37209

Chattanooga North DMV (Chattanooga DMA)

4873 Dayton Blvd

Chattanooga, TN 37415

Chattanooga DMV (Chattanooga DMA)

6502 Bonny Oaks

Chattanooga, TN 37416

Knoxville DMV (Control)

7320 Regions Lane

Knoxville, TN 37914

Clinton DMV (Control)

704 North Charles G. Seivers Blvd.

Clinton, TN 37716

Awareness Survey Form – English (Oklahoma)

The Oklahoma Highway Safety Office is conducting a survey on traffic safety. Your answers are voluntary.

1. Your sex: Male Female

2. Your age: 16-17 18-20 21-24 25-34 35-44 45-54 55+

3. Your race: White Black or African American Asian American Indian or Alaska Native
 Native Hawaiian or Other Pacific Islander

4. Are you of Hispanic or Latino origin? Yes No

5. Your Zip Code: _____

6. What type of vehicle do you drive most often?
 Car Pickup SUV Mini-van Full-van Motorcycle Other

7. How often do you wear seat belts when you drive or ride in that vehicle?
 Always Most of the time Half the time Rarely Never

8. Compared to daytime use, how often do you wear your seat belts at night?
 More often About the same Less often

9. In the past 30 days, have you read, seen or heard anything about seat belt law enforcement in Oklahoma?
 Yes No

 If yes, where did you see or hear about such enforcement? (Check all that apply)
 Newspaper Radio TV Poster Brochure Police checkpoint Internet Other

10. In the past 30 days, have you read, seen or heard anything about seat belt law enforcement at night?
 Yes No

11. What do you think someone's chances are of getting a ticket for not wearing a seat belt?
 Very Likely Somewhat Likely Somewhat Unlikely Very Unlikely Don't know

12. In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?
 _____ (number of times) or I don't drink alcoholic beverages

13. Have you recently read, seen or heard anything about alcohol impaired driving (or drunk driving) enforcement in Oklahoma?
 Yes No

 If yes, where did you see or hear about such enforcement? (Check all that apply)
 Newspaper Radio TV Poster Brochure Police checkpoint Internet Other

14. What do you think someone's chances are of getting arrested if they drive drunk?
 Very Likely Somewhat Likely Somewhat Unlikely Very Unlikely Don't know

15. In the past 30 days, have you read, seen or heard anything about speed enforcement in Oklahoma?
 Yes No

16. What do you think someone's chances are of getting a ticket if they are speeding?
 Very Likely Somewhat Likely Somewhat Unlikely Very Unlikely Don't know

17. Which of these slogans have you heard before? (Check all that apply)
 Click it or Ticket Friends Don't Let Friends Drive Drunk More Cops More Stops
 Drive Sober or Get Pulled Over Buckle Up In Your Truck Buckles Are My Business, Make Them Yours

Awareness Survey Form – English (Tennessee)

The Governor's Highway Safety Office is conducting a survey on traffic safety. Your answers are voluntary.

1. Your sex: Male Female
2. Your age: 16-17 18-20 21-24 25-34 35-44 45-54 55+
3. Your race: White Black or African American Asian American Indian or Alaska Native
 Native Hawaiian or Other Pacific Islander

4. Are you of Hispanic or Latino origin? Yes No

5. Your Zip Code: _____

6. What type of vehicle do you drive most often?

- Car Pickup SUV Mini-van Full-van Motorcycle Other

7. How frequently do you drive between 9 PM and 3 AM?

- Frequently Somewhat Frequently Seldom Never

8. In the past 30 days, have you read, seen or heard anything about increased traffic enforcement in Tennessee?

- Yes No

If yes, where did you see or hear about such enforcement? (Check all that apply)

- Newspaper Radio TV Poster Brochure Police checkpoint Internet Other

9. In the past 30 days, have you seen more law enforcement on the road than you normally do?

- Yes No

10. In the past 30 days, have you read, seen or heard anything about seat belt law enforcement in Tennessee?

- Yes No

If yes, where did you see or hear about such enforcement? (Check all that apply)

- Newspaper Radio TV Poster Brochure Police checkpoint Internet Other

11. In the past 30 days, have you read, seen or heard anything about seat belt law enforcement at night?

- Yes No

12. What do you think someone's chances are of getting a ticket for not wearing a seat belt?

- Very Likely Somewhat Likely Somewhat Unlikely Very Unlikely Don't know

13. In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages? _____
(number of times) or I don't drink alcoholic beverages

14. Have you recently read, seen or heard anything about alcohol impaired driving (or drunk driving) enforcement in Tennessee?

- Yes No

If yes, where did you see or hear about such enforcement? (Check all that apply)

- Newspaper Radio TV Poster Brochure Police checkpoint Internet Other

15. What do you think someone's chances are of getting arrested if they drive drunk?

- Very Likely Somewhat Likely Somewhat Unlikely Very Unlikely Don't know

16. In the past 30 days, have you read, seen or heard anything about speed enforcement in Tennessee?

- Yes No

If yes, where did you see or hear about such enforcement? (Check all that apply)

- Newspaper Radio TV Poster Brochure Police checkpoint Internet Other

17. What do you think someone's chances are of getting a ticket if they are speeding?

- Very Likely Somewhat Likely Somewhat Unlikely Very Unlikely Don't know

18. Which of these slogans have you heard before? (Check all that apply)

- Click it or Ticket Friends Don't Let Friends Drive Drunk More Cops More Stops
 Drive Sober or Get Pulled Over 100 Days of Summer Heat Drive Drunk Get Nailed

Awareness Survey Form – Spanish (Oklahoma)

La Oficina de Seguridad Vial está ayudando con un estudio de seguridad de tráfico. Sus respuestas son voluntarias.

1. **Su sexo:** Masculino Femenino
2. **Su edad:** 16-17 18-20 21-24 25-34 35-44 45-54 55+
3. **Su raza:** Blanca Negra o Africana Americana Asiática India Americana o Nativa de Alaska
 Nativa de Hawaii Otra de las islas Pacífico
4. **Es de origen hispano o latino?** Si No
5. **Su código postal:** _____
6. **¿Qué clase de vehículo conduce con más frecuencia?**
 Coche Camioneta SUV Van Motocicleta Otro
7. **¿Con qué frecuencia usa el cinturón de seguridad cuando conduce o viaja en ese vehículo?**
 Siempre La mayoría de las veces La mitad del tiempo Rara vez Nunca
8. **Comparado con el uso durante el día, ¿cuántas veces usa el cinturón de seguridad de noche?**
 Con más frecuencia Sobre el mismo Con menos frecuencia
9. **En los últimos 30 días, has leído, visto o oído algo acerca de la aplicación de la ley del cinturón de seguridad en Oklahoma?**
 Si No

Si la respuesta es afirmativa, ¿dónde has leído, visto o oído algo acerca de la aplicación de la ley del cinturón de seguridad? (Marque todo lo que sea aplicable)
 Periódico Radio TV Anuncio Folleto Puesto de control policia Internet Otro
10. **En los últimos 30 días, ha leído, visto u oído algo acerca de la aplicación de la ley del cinturón de seguridad por la noche?**
 Si No
11. **¿Cual cree que es la posibilidad de ser arrestado/detenido por no llevar el cinturón de seguridad puesto?**
 Muy probable Algo probable Un poco probable Muy poco probable No sé
12. **En los últimos 30 días, ¿cuántas veces ha conducido un vehículo dentro de dos horas de haber tomado bebidas alcohólicas? _____ (número de veces)** No tomo bebidas alcohólicas
13. **En los últimos 30 días, has leído, visto o oído algo acerca de la aplicación de la ley de manejar embriagado (o conducir borracho) en Oklahoma?** Si No

Si la respuesta es afirmativa, ¿dónde has leído, visto o oído algo acerca de la aplicación de la ley? (Marque todo lo que sea aplicable)
 Periódico Radio TV Anuncio Folleto Puesto de control policia Internet Otro
14. **¿Cual cree que es la posibilidad de ser arrestado/detenido por conducir borracho?**
 Muy probable Algo probable Un poco probable Muy poco probable No sé
15. **En los últimos 30 días, has leído, visto o oído algo acerca de la aplicación de la ley del exceso de velocidad en Oklahoma?**
 Si No
16. **¿Cual cree que es la posibilidad de recibir una multa por exceso de velocidad?**
 Muy probable Algo probable Un poco probable Muy poco probable No sé
17. **¿Cuál de estas frases has oído antes? (Marque todo lo que sea aplicable)**
 Click it or Ticket Friends Don't Let Friends Drive Drunk More Cops More Stops
 Drive Sober or Get Pulled Over Buckle Up In Your Truck Buckles Are My Business, Make Them Yours

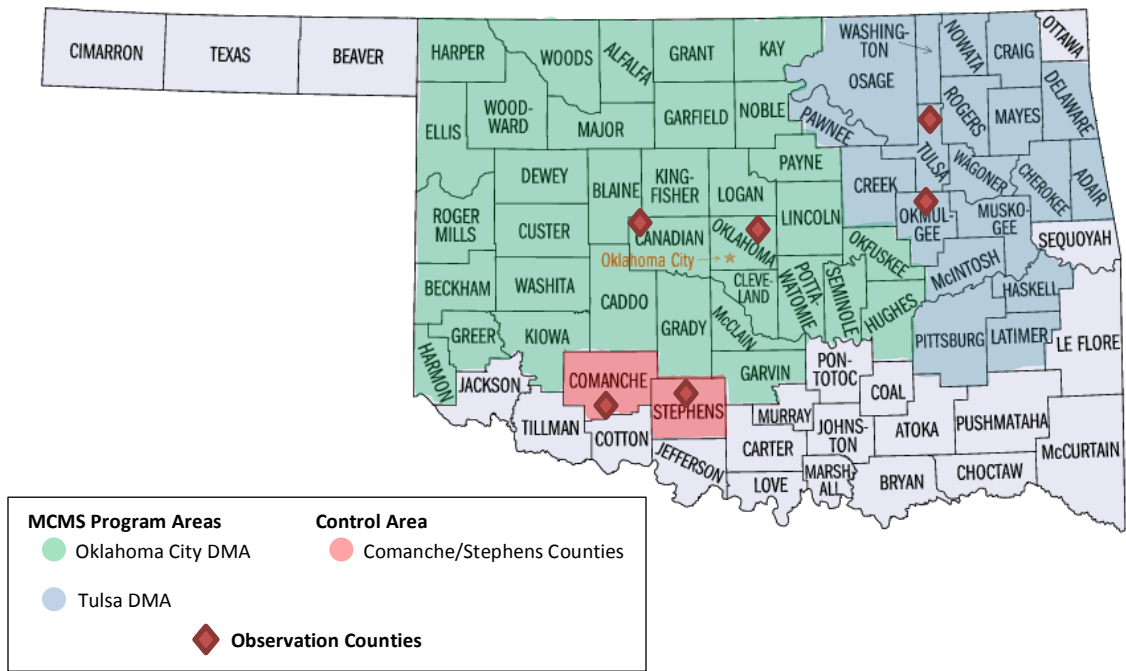
Awareness Survey Form – Spanish (Tennessee)

La Oficina del Gobernacion de Seguridad Vial está ayudando en un estudio en la seguridad del tráfico. Sus respuestas son voluntarias.

1. **Su sexo:** Masculino Femenino
2. **Su edad:** 16-17 18-20 21-24 25-34 35-44 45-54 55+
3. **Su raza:** Blanca Negra o Africana Americana Asiática India Americana o Nativa de Alaska
 Nativa de Hawaii Otra de las islas Pacífico
4. **Es de origen hispano o latino?** Si No
5. **Su código postal:** _____
6. **Qué clase de vehículo conduce con más frecuencia?**
 Coche Camioneta SUV Van Motocicleta Otro
7. **Con qué frecuencia manejas entre las 9 PM y 3 AM?**
 Frecuentemente Algunas veces con frecuencia Raramente Nunca
8. **En los últimos 30 días, ha leído, visto o escuchado algo acerca de la aumentada aplicación de la ley de tráfico por la policía in Tennessee?** Si No
 Si la respuesta es afirmativa, ¿dónde has leído, visto o oído algo acerca de la aplicación de la ley?
 (Marque todo lo que sea aplicable)
 Periódico Radio TV Anuncio Folleto Puesto de control policia Internet Otro
9. **En los últimos 30 días, has visto mas presencia de la ley en la carretera mas de lo normal?**
 Si No
10. **En los últimos 30 días, has leído, visto o oído algo acerca de la aplicación de la ley del cinturón de seguridad en Tennessee?**
 Si No
 Si la respuesta es afirmativa, ¿dónde has leído, visto o oído algo acerca de aplicación de la ley?
 (Marque todo lo que sea aplicable)
 Periódico Radio TV Anuncio Folleto Puesto de control policia Internet Otro
11. **En los últimos 30 días, ha leído, visto u oído algo acerca de la aplicación de la ley del cinturón de seguridad por la noche?** Si No
12. **Cual cree que es la posibilidad de ser arrestado/detenido por no llevar el cinturón de seguridad puesto?**
 Muy probable Algo probable Un poco probable Muy poco probable No sé
13. **En los últimos 30 días, ¿cuántas veces ha conducido un vehículo dentro de dos horas de haber tomado bebidas alcohólicas?** _____ (número de veces) No tomo bebidas alcohólicas
14. **En los últimos 30 días, has leído, visto o oído algo acerca de la aplicación de la ley de manejar embriagado (o conducir borracho) en Tennessee?** Si No
 Si la respuesta es afirmativa, ¿dónde has leído, visto o oído algo acerca de la aplicación de la ley?
 (Marque todo lo que sea aplicable)
 Periódico Radio TV Anuncio Folleto Puesto de control policia Internet Otro
15. **Cual cree que es la posibilidad de ser arrestado/detenido por conducir borracho?**
 Muy probable Algo probable Un poco probable Muy poco probable No sé
16. **En los últimos 30 días, has leído, visto o oído algo acerca de la aplicación de la ley del exceso de velocidad en Tennessee?**
 Si No
 Si la respuesta es afirmativa, ¿dónde has leído, visto o oído algo acerca de la aplicación de la ley?
 (Marque todo lo que sea aplicable)
 Periódico Radio TV Anuncio Folleto Puesto de control policia Internet Otro
17. **Cual cree que es la posibilidad de recibir una multa por exceso de velocidad?**
 Muy probable Algo probable Un poco probable Muy poco probable No sé
18. **Cuál de estas frases has oído antes? (Marque todo lo que sea aplicable)**
 Click it or Ticket Friends Don't Let Friends Drive Drunk More Cops More Stops
 Drive Sober or Get Pulled Over 100 Days of Summer Heat Drive Drunk Get Nailed

APPENDIX D – OBSERVATIONAL SURVEY

Oklahoma Observational Survey Counties



Day/Night Observational Survey Locations

Oklahoma City DMA Observation Sites

- 1 I-35 North Exit 125 -- Southeast 15th Street - Oklahoma River
- 2 I-35 Exit 122B or 123A -- Southeast 51st Street- Southeast 59th St
- 3 I-35 South Exit 125 -- Southeast 15th Street - Oklahoma River
- 4 0.5 Mile North of East Hefner Rd
- 5 Broadway Ext. Southbound -- 0.5 miles North of West Memorial Rd
- 6 Broadway Ext. Northbound -- 0.5 miles North of West Memorial Rd
- 7 NE 23rd Street -- 0.5 Mile East of North Bryant Ave
- 8 Northwest Expressway (Hwy 3) -- 0.2 Mile East of North Meridian Ave
- 9 NW Expwy b/w North Council Rd & North County Line Rd -- 0.3 Mile West of North Council Rd
- 10 OK-152 b/w South Council Rd and SW 59th St -- 0.5 Miles West of South Council Rd
- 11 East 2nd St (Hwy 77) near North Oakridge Dr -- 0.5 mile west of I035
- 12 North Portland Ave between 150th St & 164th St -- 0.5 Mile North of NW 150th St
- 13 South Harrah Rd -- 0.5 Miles North of Southeast 29th St
- 14 0.1 Mile East of I035
- 15 0.5 Mile East of North Anderson Rd
- 16 Wildhorse Creek - North Dobbs Rd
- 17 East OK-66 & South Westminster -- 0.1 Mile West of North Westminster Blvd
- 18 NE 192nd St near North Indian Meridian -- 0.5 Mile East of North Choctaw Rd
- 19 I-40 Exit 139 -- 1.2 Mile East of US 4 on I 40
- 20 US 152 near North Sara Rd -- 0.75 Mile East of US 4 on US 152
- 21 US 152 near North Czech Hall Rd -- 1.25 Mile East of US 92 on US 152
- 22 East Main St near South Cornwell Drive -- 0.02 Mile East of US 4 on US 66
- 23 S Mustang Rd just near SW 54th St -- 1.25 Mile North of US 152 on US 4
- 24 S Mustang Rd (US 4) near SW 15th Street -- 3.75 Mile North of US 152 on US 4
- 25 Hwy 4 near SW 89th St. East -- 2.75 Mile North of Grady County Line

Day/Night Observational Survey Locations

Tulsa DMA Observation Sites

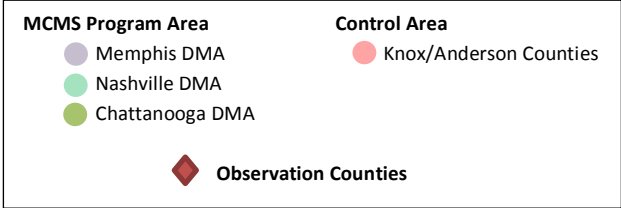
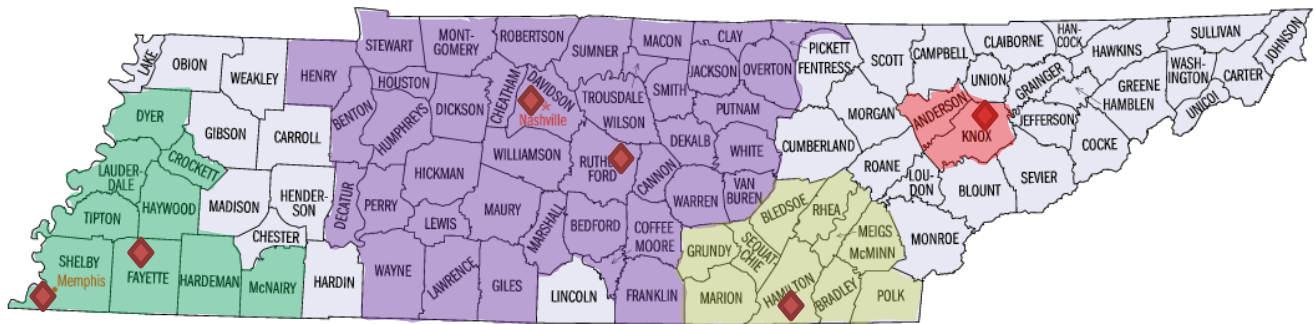
- 1 Hwy 169 @ 41st St
- 2 Hwy 64/169 @ East 81st St
- 3 75 North (Exit 3) @ Southwest Blvd
- 4 US 64 (SH51) @ South Harvard Ave
- 5 I-40 W @ Exit 237
- 6 South Memorial Dr @ E 98th St
- 7 Hwy 97/51 @ Morrow Rd
- 8 Hwy 75 @ East 146th St North
- 9 US 75 -- North of 86th St
- 10 Memorial (US 64) @ 41st St
- 11 Hwy 169 @ E 146th St North
- 12 Hwy 20 @ Hwy 11
- 13 South Wood Drive (US 75/62) @ 20th St
- 14 Hwy 75 North @ Hwy 16 Exit
- 15 Hwy 75/62 N @ Hwy 266/52
- 16 East 151st St @ Hwy 64
- 17 East 41st St South @ South Lewis Ave
- 18 South Lewis Ave @ 51st South
- 19 East 11th St @ Oswego Ave
- 20 East 36th St North & Peoria Ave
- 21 West 121st Street @ South Waco
- 22 South Yale Ave @ East 11th St South
- 23 East 20th St (Hwy 56) @ Creek Forest
- 24 Hwy 16 (Alt75) near Birch Lane Drive
- 25 Loop 56 (Bus 56) just East of Hwy 75

Day/Night Observational Survey Locations

Lawton DMA Observation Sites

- 1 I-44 South Exit 37 - 0.4 Miles North of Gore Blvd
- 2 I-44 Exit 36 - 0.3 Miles North of SH 7
- 3 I-44 Exit 46
- 4 SW 2nd Street -- 0.2 Miles South of Gore Blvd
- 5 SE Lee Blvd -- 0.2 Miles East of I 44
- 6 Old US 62 NW Cahe Rd - 0.6 Miles East of Deyo Rd
- 7 Hwy 7 -- 0.3 Miles East of SH 65
- 8 Hwy 62 -- 0.4 Miles West of SH 115
- 9 Hwy 62 -- 6.5 Miles West of SH 115
- 10 Hwy 7 -- 0.3 Miles West of SH 65
- 11 0.5 Miles East of Ft Sill Blvd
- 12 I-44 South Exit 45 -- Mile Marker 45
- 13 Hwy 277 just East of G Street
- 14 Hwy 49 between NW Stoney Point Rd & PR Rd -- 1.5 Miles West of I 44
- 15 US 277/US-281A near E1740 Rd -- 0.5 Miles South of SH 36
- 16 US 281 near McCracken Road -- 3.1 Miles South of US 277
- 17 Hwy 49 near 4-Mile Road -- 3.4 Miles West of I 44
- 18 Hwy 81 - 1.2 Miles North of Duncan Bypass
- 19 South Hwy 81 - 0.3 Miles South of SH 7
- 20 Broadway St - 1.2 Miles South of SH 29
- 21 East Main St - 0.6 Miles East of US 81
- 22 Hwy 29 - 0.2 Miles West of SH 76
- 23 South 9th Street - 0.3 Miles North of SH 7
- 24 0.2 Miles West of NS 290
- 25 0.6 Miles East of US 81

Tennessee Observational Survey Counties



Day/Night Observational Survey Locations

Memphis DMA Observation Sites

- 1 I-40 @ Exit 1A South Ramp
- 2 I-40 @ Exit 1F (Jackson Ave)
- 3 I-55 @ Shelby Dr
- 4 I-240 @ Exit 23
- 5 Poplar @ I-240
- 6 Hwy 61/14 @ Shelby Dr
- 7 Lamar Rd @ Hwy 51
- 8 East Parkway @ Poplar
- 9 Jackson Ave @ Hollywood
- 10 Getwell Rd @ American Way
- 11 Winchester @ Tchulahoma
- 12 Hwy 51 @ Martha/Navy Rd (in Millington)
- 13 Shelby Dr. @ Getwell Rd
- 14 Germantown Rd @ Stage Rd
- 15 Poplar Ave @ White Station
- 16 Riverside Dr @ Union Ave
- 17 Holmes Rd @ Tulane Rd
- 18 Covington Pike @ Pleasant View
- 19 Macon Rd @ Maria St
- 20 Mendenall Rd @ Walnut Grove Rd
- 21 Park Rd @ Mount Moriah
- 22 White Station Rd @ Sanderlin Ave
- 23 Wolf River Blvd @ Germantown Rd
- 24 Hacks Cross Rd @ Lowrance Rd
- 25 Whitten Rd @ Reese Rd

Day/Night Observational Survey Locations

Nashville DMA Observation Sites

- 1 I-65 @ Exit 78A
- 2 I-440 @ Exit 1A On Ramp
- 3 I-65 @ Exit 85
- 4 I-40@ Exit 204b off ramp
- 5 I-24 @ Exit 78A
- 6 SR 234 @ SR 106
- 7 SR 70/1 @ Page Rd
- 8 SR-12/1 @ Trinity Ln
- 9 SR 6@ Battery Lane
- 10 Old Hickory @ Gallatin Ave
- 11 SR 24/Lebanon Pike @ McGavock Pike
- 12 SR 1/Murfreesboro Pike@ Hobson Pike
- 13 SR 41/Lowry @ West Enon Springs Rd
- 14 SR266 @ Weakley Ln
- 15 Memorial Blvd near East Clark
- 16 Charlotte Ave @ 14th St
- 17 Douglas Ave @ Gallatin Ave
- 18 Haywood Ln@ Antioch Pike
- 19 Bell Rd/SR254@I-24
- 20 Hickory Hollow Pkwy @ Bell Rd
- 21 Bell Rd @ or near Harbor Lights Dr
- 22 Burnt Knob Rd @ Blackman Rd
- 23 Thompson Ln @ Broad St
- 24 Tenn. Blvd@ Faulkinberry Dr
- 25 Bell Rd @ I-40 off Ramp

Day/Night Observational Survey Locations

Chattanooga DMA Observation Sites

- 1 1-24 (west of SR- 27)
- 2 I-24 @ Exit 180a
- 3 I-24@ Exit 184
- 4 I-24W @ Exit 181 on-ramp
- 5 I-75@ Exit 3 (Brainered) to Hickory Valley Rd
- 6 SR153@ Gadd Rd
- 7 SR320- E Brainered @ Walker St
- 8 SR 11 Brainered Rd @ Old Mission Rd
- 9 Westside Dr @ Westside Grille
- 10 SR27 @ 42th St
- 11 SR76 @ (Ringgold) at McBrien RD
- 12 SR 127@Mountain Creek Rd
- 13 SR 27 Soddy Daisy Exit at Sequoyah Rd
- 14 Brainered Rd near Vista Drive
- 15 Ringgold Rd @ Marlboro Ave
- 16 Dayton Blvd@ SR127 (Signal Mountain)
- 17 Hixson Pike @ Lupton Dr
- 18 Shallowford Rd@ Airport Rd
- 19 Glenwood Dr @ E 3rd St
- 20 Wilcox Blvd@ Dodson
- 21 North Access Rd@ Hixon Pike
- 22 Shallowford Rd@ Lee Hwy
- 23 Ochs Hwy @ Guild Trail
- 24 Mountain Creek Rd @ Cross St
- 25 Tallant Rd @ Apison Pike

Day/Night Observational Survey Locations

Knoxville DMA Observation Sites

- 1 I-75 SB @ Western Ave on-ramp to I-75 South
- 2 I-40 West of Knoxville (near I-386)
- 3 I-75 @ Exit 108
- 4 I-40 @ Exit 373
- 5 I-275 Northbound @ Heiskell Ave
- 6 Between Broad St. and East Magnolia
- 7 SR-1 @ Campbell Station Rd
- 8 Chapman Hwy @ Overbrook Rd
- 9 Alcoa Hwy @ Topside
- 10 Middlebrook Pk North of I-40
- 11 Neyland Dr East of Henley Street
- 12 SR-162 @ Schaeffer Rd
- 13 SR-131 @ Lexington Dr
- 14 N Broadway @ Marietta Ave/Topeka St
- 15 Clinton Pike (25W) @ Shaad Rd
- 16 Campbell Station Rd near Loudon County Line
- 17 Weisgarber Rd @ Lonas
- 18 South Peters Rd (South of 70)
- 19 Northeast near I-640
- 20 Summit Hill Dr @ Gay St
- 21 Callahan Dr West of I-75
- 22 Dante Rd – East of Central Pike
- 23 North Gallagher View Rd North of SR-1
- 24 Emory Rd @ Norris Frwy/441
- 25 Mascot Pike @ Andrew Johnson Hwy/11E

Day/Night Observational Survey of Seat Belt Form

Daytime: _____ or Nighttime: _____ Site #: _____ Observer Initials: _____

Date: _____ - _____ - _____ Day of Week: _____

Circle Direction(s) of Travel Observed: N S E W

Weather Condition: Clear _____ Light Rain/Snow _____ Clear but Wet _____

START TIME: _____ END TIME: _____

DRIVER			PASSENGER			DRIVER			PASSENGER		
	Veh. Type C=Car T=Truck S=SUV V=Van	Sex M=Male F=Female U=Unsure	Belt Use + = Yes - = No U=Unsure	Sex M=Male F=Female U=Unsure	Belt Use + = Yes - = No U=Unsure		Veh. Type C=Car T=Truck S=SUV V=Van	Sex M=Male F=Female U=Unsure	Belt Use + = Yes - = No U=Unsure	Sex M=Male F=Female U=Unsure	Belt Use + = Yes - = No U=Unsure
1						26					
2						27					
3						28					
4						29					
5						30					
6						31					
7						32					
8						33					
9						34					
10						35					
11						36					
12						37					
13						38					
14						39					
15						40					
16						41					
17						42					
18						43					
19						44					
20						45					

Pg: _____ of _____

Observational Survey of Seat Belt Use Protocol (Annotated)

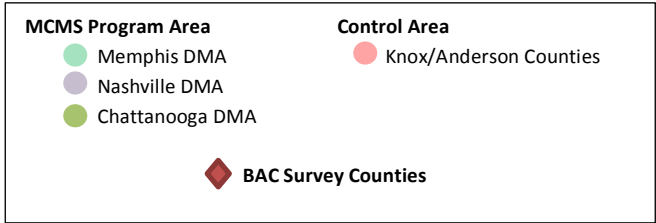
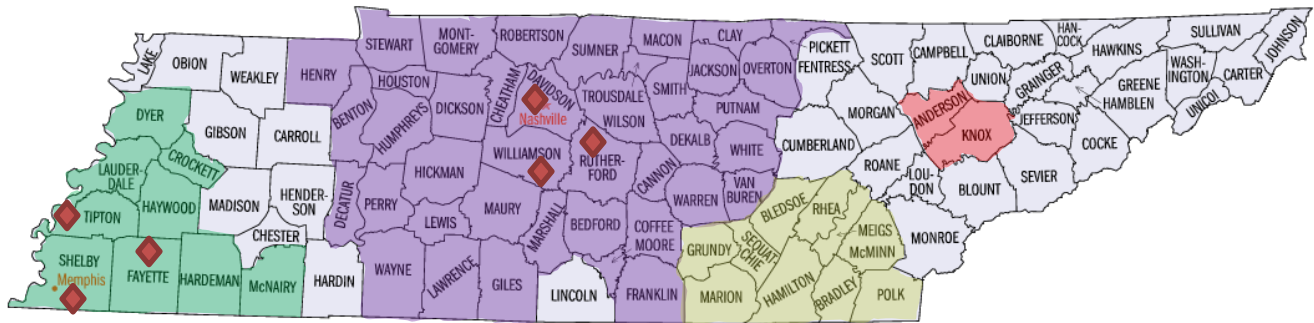
- Qualifying vehicles include passenger automobiles, pickup trucks, recreational vehicles, jeeps or vans (private, public and commercial). Pickup trucks should be coded as “trucks”. Jeeps, Broncos, Blazers and other vehicles of that type should be coded as sport utility vehicles. Eligible vehicles should be observed regardless of the state in which they are registered.
- Belt use will be observed for front seat occupants only. Observe and record data for the driver and passenger in the right front seat. If there is more than one front seat passenger, observe only the “outside” passenger closest to the front doors. Do not record data for passengers in the back seat or for a third passenger riding in the middle of the front seat.
- If a child is present in the front seat in a child restraint seat, do not record anything. However, children riding in the front seat, regardless of age, who are not in child restraint seats should be observed as any other front seat passenger.
- Each observation period will last for exactly 45 minutes.

The following procedures will be used in conducting observations of seat belt use:

1. As you observe a qualifying vehicle, record the type of vehicle (car, truck, SUV, van), the occupants' sex (male or female), and shoulder restraint use (yes or no) of the front seat occupants (driver and front seat “outside” passenger only).
2. If you notice a lap belt in use without a shoulder belt, it should be recorded as not restrained. Only shoulder belts are to be counted. Even if the vehicle likely has no shoulder belts, code the occupant(s) as not restrained.
3. If the person is using the shoulder belt improperly, e.g., has the shoulder strap under his/her arm or behind the back, this should be recorded as not restrained.
4. If traffic is light enough and you can see well, observe traffic moving in both directions (and indicate it by circling both directions on the form) and explain this on the backside of the first page data collection form.
5. In many situations, it will be possible to observe every vehicle in the designated directions/lane(s). However, if there is too much traffic for you to observe every vehicle, you should determine a reference point up the road in the appropriate lane. Observe the next vehicle to pass the reference point after the last vehicle has been coded.
6. Do not observe if it is raining hard or other inclement weather arises and makes observing or writing down information impossible. If you arrive at a site and it begins to rain hard, do not collect data in the rain. Find a dry place and wait 15 minutes to see if the rain stops. If the rain does stop, begin observing again and extend the observation period to make up for the time missed. Otherwise, you will have to reschedule the site. (Note: observer may continue observations in light fog, drizzle, or mist).
7. If more than one data sheet is used, staple the sheets together at the end of the observation period and note the number of sheets used at the top of the first data page.
8. It may happen that the site you are assigned is seriously compromised due to construction. If this occurs, you may move in either direction on the same street such that you are observing the same stream of traffic that would have normally been observed had there been no obstruction. If moving one block will not solve the problem, then do not conduct the observation. You should select an alternate site to use.

APPENDIX E - ROADSIDE BrAC SURVEY (in Tennessee)

Tennessee Roadside BrAC Survey Counties



Tennessee Roadside BrAC Collection Locations

Nashville DMA

Thursday night

1. Old Nashville Hwy between Delacey & Hankins Dr, Smyrna, TN 37167 (Rutherford County)
Time: 2000-2200
2. New Nashville Hwy @ Stroop Lane, Smyrna, TN 37167 (Rutherford County)
Time: 2400-0200

Friday night

1. Murphreesboro Pike between McGavock Pike & Dell Prkwy Nashville, TN 37217 (Davidson County)
Time: 2100-2300
2. Murphreesboro Pike between McGavock Pike & Dell Prkwy Nashville, TN 37217 (Davidson County)
Time: 2400-0200

Saturday night

1. Murphreesboro Road west of 840 (near Hawkins Rd), College Grove, TN 37046 (Williamson County)
Time: 1900-2100
2. Columbia Pike/Main St north of Jackson Pkwy Spring Hill, TN 37174 (Williamson County)
Time: 2300-0100

Memphis DMA

Thursday night

1. Whitten Rd & Hillshire Drive, Memphis, TN 38134 (Shelby County)
Time: 2000-2200
2. Hacks Cross Rd & Centennial Drive, Memphis, TN 38125 (Shelby County)
Time: 2300-0100

Friday night

1. Wilkingsville Rd south of Simmons Rd, Millington, TN 38053 (Tipton County)
Time: 1900-2100
2. TN 14 between Hilltop Cir & Pointdexter Rd, Brighton, TN 38011 (Tipton County)
Time: 2300-0100

Saturday night

1. Hwy 64 near Cherry Road, Eads, TN 38028 (Fayette County)
Time: 2100-2300
2. Hwy 193 & Hwy 385, Collierville, TN 38017 (Fayette County)
Time: 2400-0200

BrAC Data Collection Form

Intoxilyzer Machine #: _____ Refused All _____
<p>If subject pulled over before inclusion in sample</p> <p>Check all that apply: Warn ___ Belt Tckt ___ CPS ___ Oth Tckt ___ FST ___ DUI ___ Other Arrest ___</p>

CIRCLE

Manually Sampled?		Took Alcohol Test?	
YES	NO	YES	NO, refused

ESTIMATE THE FOLLOWING

<u>Age</u>	<u>Sex</u>	<u>Race</u>	<u># of Passengers</u>	<u>Type of vehicle</u>
__ 16-24	__ M	__ White	__ 0	__ Passenger car
__ 25-34	__ F	__ Black	__ 1	__ Pick-up truck
__ 35-49		__ Asian	__ 2	__ Minivan
__ 50-64		__ Other	__ 3	__ Full-size van
__ 65+			__ 4	__ SUV
		<u>Hispanic</u>	__ 5	__ Truck
		__ Yes	__ more	__ Other
		__ No		

Test #: _____

If FST'ed and passes request, preliminary BrAC test result from officer if available: _____

If DUI arrest, evidentiary BrAC test: _____

BrAC Data Collection Contact Protocol

My name is _____. We are doing research at this checkpoint tonight for a highway safety project. We have a few quick questions. Can we have a few seconds of your time? Any information you provide will be strictly voluntary and anonymous. Your participation is voluntary. **Will you agree to participate at this time?**

If no, release immediately from study participation.
If yes, hand them a study brochure.

Next, briefly establish a rapport with participant by engaging them in the following suggested topical areas (less than 30 seconds). Do not record any information at this point in time.

Where are you coming from?

Where are you headed tonight?

Have you ever been through a police checkpoint before?

Do you favor the use of checkpoints by police to enforce the law against drinking and driving?

Within the past month, have you seen, heard or read about any special police efforts to enforce the law against drinking and driving?

Then explain the following.

We are asking everyone tonight to blow into our alcohol test machine, whether or not they've been drinking. The machine will not show your test results. They are downloaded into a large database... your test results in the database cannot be connected to you or your vehicle.

Instruct the person how to blow.

Note: If the driver volunteers to take the breath test the results are not displayed to either the driver or researcher.

Then state.

Thank you for your help with our research project this evening! Have a safe night!

Lastly

Fill in (do not ask) age using the categories, sex, race, whether the person is Hispanic, number of passengers, and vehicle type. Indicate by checkmark a top of data collection form any drivers you interviewed who were ticketed for belt, child protective seat (CPS), or other.

If driver was stopped for DUI prior to sample selection, see if the arresting officer has preliminary breath test evidentiary BAC information that you can record.

DOT HS 812 337
October 2016



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

