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Evaluation of the Washington Nighttime Seat Belt Enforcement Program

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16. Abstract The Washington Traffic Safety Commission (WTSC) and the National Highway Traffic Safety Administration (NHTSA) conducted a high-visibility Nighttime Seat Belt Enforcement (NTSBE) program in Washington. The two-year program followed the basic <i>Click It or Ticket</i> (CIOT) model by using highly visible enforcement combined with increased paid and earned media about the enforcement but applied its efforts during the nighttime rather than the daytime hours. Public awareness surveys showed that 70% of Washington motorists had read, heard, or seen the program, and the message reached 18- to 34-year-old male drivers, the primary high-risk group. Observations at 40 sites across the State showed a statistically significant increase in night belt use. Night belt use began at 95% before the NTSBE program, and it peaked at 97% in July 2009. Daytime belt use remained high, despite focusing all CIOT efforts during the nighttime hours. Time-series analysis of fatality data showed that after the NTSBE campaign there was a reduction of 3.4 nighttime fatalities per month in Washington. Belt use among fatally injured occupants in both daytime and nighttime increased after NTSBE, but the increase was not statistical significant when compared to all primary law States. The NTSBE program positively affected driver awareness, increased observed nighttime seat belt use, and did not decrease the daytime use rate.					
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EXECUTIVE SUMMARY

In 2006, Washington's daytime belt use rate of 96% was one of the highest rates in the nation. Washington's nighttime fatalities, however, were four times greater than daytime fatalities. The National Highway Traffic Safety Administration (NHTSA) and the Washington Traffic Safety Commission (WTSC) worked together to conduct a statewide high-visibility Nighttime Seat Belt Enforcement (NTSBE) program to address high fatality rates at night. The program followed NHTSA's basic *Click It or Ticket* (CIOT) model, but each of the enforcement waves occurred during the nighttime rather than the daytime. This report describes the activities that took place during the two-year NTSBE program and the evaluation of the results.

The NTSBE program combined high-visibility enforcement supported by paid and earned media about the enforcement to increase nighttime seat belt use via general deterrence. WTSC developed radio and television advertisements that featured the head of Field Operations for the Washington State Patrol (WSP). The primary message of the ad was that "*extra seat belt-focused law enforcement patrols are taking place at night because the death rate at night is four times higher than it is during the day.*" Over the two-year project, WTSC spent \$1,358,867 on media and received placements valued at an estimated \$2,782,253. In addition, 3,876 public service announcement placements were "earned" on TV, radio, and in newspapers. There were five dedicated nighttime enforcement waves – May 2007, October 2007, May 2008, October 2008 and May 2009. The May waves coincided with national *Click It or Ticket* mobilizations. The program spent \$1,594,350 on law enforcement over the two years of the program, and Washington officers issued 20,721 seat belt citations during NTSBE activities.

The evaluation activities included public awareness surveys and observations of seat belt use. Public awareness surveys found that the paid media messages and enforcement campaigns successfully delivered the message. Most motorists (70%) surveyed at driver licensing offices across the State reported that they saw and heard the NTSBE messages about increased nighttime enforcement and noticed increased enforcement at night. After each wave, the percentages of survey respondents who said they had read, seen, or heard any media about nighttime time seat belt enforcement increased. There also were large increases in the percentage of survey respondents who said they had noticed increased seat belt enforcement at night. About 8 in 10 young males 18 to 34 years old, the primary high-risk target group, knew about the stepped-up enforcement occurring at night across the State.

Day and night observations of seat belt usage occurred at 40 observation sites. Together, the 40 sites produced a belt use rate similar to the statewide daytime use rate. Both day and night belt use started and remained high. Although there was some fluctuation, there was an increasing trend in nighttime and daytime seat belt use over time, but NTSBE had a larger effect on nighttime belt use than on daytime belt use. It was unknown how shifting CIOT resources from daytime to nighttime might affect daytime belt use. However, Washington's statewide daytime use rate showed essentially no change from 2007 to 2009. The official statewide survey has more than 10 times as many sites as the mini-sample surveys, provides the best representation of daytime seat belt use across the State, and is less prone to error. Belt use remained extremely high whether measured by either the statewide or the 40-site subsample.

As part of the first year of NTSBE activities, WTSC conducted officer debriefings with representatives from several of the participating law enforcement agencies to assess how the program was working. One of the sessions included law enforcement personnel from agencies that had not participated in the program. The law enforcement officers supported WTSC's focus on nighttime seat belt usage even though it was new to many agencies. Law enforcement personnel said that the publicity campaign was critical and enhanced their enforcement efforts. They reported relatively minor operational issues, most of which dealt with the initial mandatory use of a stationary spotter. Officers reported that the stationary spotter was not effective in low volume areas at night, and many agencies began using roving patrols to meet their contact targets for the campaigns. In response to these comments, WTSC relaxed the requirement and permitted grantees more discretion. Officers thought that with minor adjustments and a little more flexibility, the program would continue to be effective in Washington even though daytime seat belt use is already high. Overall, the law enforcement officers said that they would highly recommend the nighttime seat belt program to other law enforcement agencies.

Researchers conducted a number of time-series analyses of fatalities from January 1994 to June 2009 to determine NTSBE's impact. In 1994 Washington's seat belt law was a secondary enforcement law, changing to primary enforcement on July 1, 2002. The analyses considered the effect of Washington's primary seat belt enforcement law in 2002 and of the nighttime enforcement program that began in May 2007, and compared Washington to two nearby States and all other primary law States during these periods. Looking at vehicle miles traveled, after primary enforcement went into effect, Washington's overall occupant fatalities per 100 million VMT were significantly lower when compared to Oregon, California, and all other primary law States. During NTSBE, Washington's overall occupant fatalities per 100 million VMT were lower but did not reach statistical significance. In other words, the fatality rates of other primary law States were also decreasing during Washington's NTSBE period. Looking at licensed drivers, after primary enforcement went into effect, Washington's overall occupant fatalities per 100,000 licensed drivers were significantly lower when compared to Oregon, California, and all other primary law States. During NTSBE, Washington's overall occupant fatalities per 100,000 licensed drivers were significantly lower when compared to the fatality rates of Oregon and all other primary law States, but the decrease did not reach statistical significance when compared to California.

Given that the combined series of all other primary law States is less variable from month-to-month than the individual States, the rest of the analyses used it as the comparison. The series of all other primary law States combined contains a larger number of occupants than the individual States and thus provides more statistical power for the comparisons. There were 2.5 fewer nighttime fatalities per month in Washington after implementation of the primary enforcement belt law and an additional 3.4 fewer nighttime occupant fatalities per month during NTSBE. Similarly, there were 2.1 fewer daytime occupant fatalities per month after primary belt law enforcement, and another 4.1 fewer daytime occupant fatalities per month during the NTSBE. Overall, these results show reductions in total daytime and nighttime occupant fatalities in Washington with both primary enforcement and NTSBE.

While the previous analyses looked at total fatalities in Washington, the next question is whether belt use among occupants who were fatally injured increased during either program. For this analysis, an increase in belt use suggests a positive effect for this high-risk group. Belt use among fatally injured Washington occupants at night increased 16.4 percentage points after

primary enforcement, but the change was not statistically significant after NTSBE. Daytime belt use among fatally injured occupants, however, was statistically significantly higher after both primary enforcement and NTSBE. These results suggest that both daytime and nighttime belt use among fatally injured occupants increased after passage of primary enforcement, but NTSBE did not produce a statistical significance effect.

Washington's nighttime enforcement strategies could be adapted to other States. Nighttime enforcement is probably not suited for rural areas or areas with low nighttime traffic volume. Nighttime enforcement takes longer per stop and yields more DUI arrests than daytime programs. Future research might focus on applying nighttime enforcement strategies in a primary law State with markedly lower belt use (closer to the national average), a greater difference between daytime and nighttime observed belt use, or in a State in the process of changing from a secondary to a primary law.

TABLE OF CONTENTS

Executive Summary	iii
1. Introduction.....	1
2. Nighttime Seat Belt Enforcement Program Activities.....	2
2.1 Nighttime Seat Belt Enforcement Media.....	3
2.1.1 The Media Message	3
2.1.2 Paid Media	3
2.1.3 Earned Media	4
2.2 Nighttime Seat Belt Enforcement	6
3. Evaluation Methods	7
3.1 Public Awareness Survey	7
3.2 Seat Belt Observations.....	8
3.2.1 Seat Belt Observation Sites.....	8
3.2.2 Daytime Observation Approach	10
3.2.3 Nighttime Observation Approach.....	10
3.2.4 Site Location and Observation Issues.....	11
3.3 WTSC Law Enforcement Debriefings.....	11
4. Results.....	11
4.1 Citations Issued.....	11
4.2 Awareness Survey in DOL Offices.....	14
4.3 Mini-Site Seat Belt Observation Results	24
4.4 Annual Statewide Observations of Daytime Seat Belt Use	25
4.5 Key Officer Debriefing Points and Summary.....	29
4.6 Overall Fatality Rates	31
4.7 Nighttime Fatality Rates in Washington.....	36
4.8 Day and Night Belt Use Based on FARS Data.....	38
4.9 Limitations	40
5. Discussion.....	41
6. References.....	42
APPENDIX A: Examples of Paid and Earned Media	A-1
APPENDIX B: Participating Law Enforcement Agencies.....	B-1
APPENDIX C: DOL Awareness Survey Questionnaire.....	C-1
APPENDIX D: DOL Awareness Survey Results	D-1
APPENDIX E: ARIMA Tables	E-1

1. INTRODUCTION

Seat belt use rates in the United States increased markedly in recent years in response to the passage of primary seat belt enforcement laws, vigorous enforcement, paid advertising, public education campaigns, and the widespread understanding among drivers that belt use greatly reduces the risk of serious injury or death in a motor vehicle crash. Washington has been one of the leading States in achieving high seat belt use rates. However, approximately 5% of vehicle occupants in Washington who do not buckle up accounted for almost half of the State's motor vehicle fatalities (Beard & Salzberg, 2005).

NHTSA's national Fatality Analysis Reporting System (FARS) confirms the overrepresentation of unbelted drivers in fatalities. As observed daytime seat belt use has increased, the percentage daytime fatalities in which an individual was not wearing a seat belt has fallen (Pickrell & Li, 2016). The problem is even worse at night. Tison, Williams, and Chaudhary (2010) showed that seat belt use among fatally injured occupants was lowest during the nighttime hours, bottoming out at about 30% between the hours of midnight to 4 a.m. While observed seat belt use is lower at night (e.g., in Connecticut as shown by Chaudhary & Preusser, 2006), FARS data also document that more of the unbuckled fatalities at night involved a driver with alcohol in his or her system (Tison, Williams, & Chaudhary, 2010).

The Washington Traffic Safety Commission worked with NHTSA to conduct and evaluate a high-visibility Nighttime Seat Belt Enforcement program in Washington. The two-year program followed the basic *Click It or Ticket* model by using highly visible enforcement combined with increased paid and earned media about the enforcement but applied its efforts in the nighttime rather than the daytime hours. The evaluation addressed the following research questions:

- Do nighttime enforcement activities lead to higher nighttime belt use?
- Do nighttime belt enforcement activities lead to increased DUI arrests and a decrease in alcohol-related crashes and fatalities?
- What is the public perception of the nighttime belt and DUI enforcement activities?
- Do these enforcement activities result in changes in peoples' self-reported behavior about seat belt use and drinking driving?

This report describes the enforcement and media activities, data collection activities, and analyses that took place across the two years of NTSBE activities (May 2007 to June 2009). It updates and extends the first year report (Thomas, Blomberg, & Van Dyk, 2010).

2. NIGHTTIME SEAT BELT ENFORCEMENT PROGRAM ACTIVITIES

The NTSBE program combined high-visibility enforcement supported by paid and earned media about the enforcement to increase seat belt use by creating general deterrence. For the entire program, WTSC combined \$2,026,001 of its own funds with \$1,252,367 from a NHTSA cooperative agreement and applied it to enforcement and publicity activities. Table 1 shows the expenditures during each statewide mobilization in NTSBE.

Table 1. Expenditures for NTSBE mobilizations

	Law Enforcement Patrols	Publicity Total	Air buy	Earned Media	Printing	Rented Road Signs	Training, Meetings, Video	Total Spent	WTSC Funds	NHTSA Funds
Year 1	First Mobilization (May 2007)									
	\$288,353	\$406,435	\$287,833	\$24,137	\$18,521	\$57,107	\$18,837	\$694,788	\$694,788	\$0
	Second Mobilization (October 2007)									
	\$282,540	\$329,823	\$285,114	\$33,641	0	\$11,068	0	\$612,363	\$12,363	\$600,000
	Sustained Patrols (2007-2008)									
	\$62,228	\$7,882	0	\$5,241	\$1,270	0	\$1,371	\$70,110	\$70,110	\$0
	Third Mobilization (May, 2008)									
\$308,462	\$352,538	\$312,377	\$25,074	0	0	\$15,087	\$661,000	\$661,000	0	
Total Year 1	\$941,583	\$1,096,678	\$885,324	\$88,093	\$19,791	\$68,175	\$35,295	\$2,038,261	\$1,438,261	\$600,000
Year 2	Fourth Mobilization (October 2008)									
	\$304,440	\$283,300	\$250,000	\$19,474	\$2,491	\$11,335	\$0	\$587,740	\$587,740	\$0
	Fifth Mobilization (May 2009)									
\$348,327	\$304,040	\$247,283	\$51,035	\$9,041	\$5534	\$1,652	\$652,367	0	\$652,367	
Total Year 2	\$652,767	\$587,340	\$497,283	\$70,509	\$11,532	\$16,869	\$1,652	\$1,240,107	\$587,740	\$652,367
Total All Years	\$1,594,350	\$1,684,018	\$1,382,607	\$158,602	\$31,323	\$85,044	\$36,947	\$3,278,368	\$2,026,001	\$1,252,367

2.1 Nighttime Seat Belt Enforcement Media

The WTSC developed media messages that followed the same messaging strategy as a daytime CIOT program. The intent of the NTSBE publicity program message was to:

1. *Reach motorists who were likely to be unbuckled.* Consistent with the daytime CIOT target audience, the nighttime target audience was male, blue-collar risk takers, largely between the ages of 18 and 34.
2. *Reach motorists numerous times.* The NTSBE publicity strategy was to reach each target audience member at least three times and, preferably, more than five times.
3. *Be compelling and believable.* The NTSBE publicity strategy was to stand out in a sea of advertising and to motivate the target audience to take action to buckle up because of the threat of enforcement. This was critical for the program. Washington's seat belt use rate was already so high that the remaining unbuckled people were likely resistant to wearing seat belts and unaffected by prior campaigns.
4. *Explain why the project was taking place.* Public support for the program was vital, especially when so many people already buckled up in Washington.

2.1.1 The Media Message

The NTSBE radio and television messages featured the head of Field Operations for the Washington State Patrol, which is a highly visible and well-known enforcement organization in Washington. The primary message of the ad was that *extra seat belt-focused law enforcement patrols are taking place at night because the death rate at night is four times higher than it is during the day.* The latter part was included to send an important message to the law compliant population about why the project was taking place. Appendix A shows the storyboard description of one of the TV spots.

2.1.2 Paid Media

The WTSC worked with Media Plus+, a Seattle media buy firm, to plan and purchase media for the NTSBE project. The media firm negotiated to get one free placement for every placement purchased. The bonus placements generally aired in the same time slots as the purchased spots.

The NTSBE publicity strategy was to have the greatest “reach” with the highest “frequency.” “Reach” refers to the percentage of the target audience who saw the message, and “frequency” describes how many times any one individual likely saw the media. To obtain the greatest reach and frequency, the planners recommended a mix of media. WTSC produced radio and television ads and web banners. WTSC facilitated coordination between the air buy contractor and the public relations (earned media) contractor to avoid duplication of effort and to promote synergies when possible.

The nighttime media campaign began before the seat belt enforcement with a brief period of publicity, and it ended when the last ad aired. Media Plus+ encouraged WTSC to be flexible with the bonus media schedule, which resulted in significantly more bonus media and more exposure to the message. WTSC worked under the assumption that if the ads continued another week beyond the enforcement, people would assume the mobilization was still underway.

During the May *Click It or Ticket* Mobilizations in 2007, 2008, and 2009, NHTSA also aired a national paid media campaign to support high-visibility seat belt enforcement. In 2007, NHTSA's paid media began to support nighttime seat belt enforcement and continued to do so into 2008 and 2009. Table 2 contains details about the paid media campaign.

Table 2. Publicity budget, reach, frequency and dollar values achieved

	NTSBE Dates	Target audience	Media Bought:	Reach / Frequency (GRP total)	Purchased Spots	Cost	Bonus Spots	Bonus Value	Total Value
Year 1	May 2007	Adults 25-54	TV	90% / 11 (990)	835	\$276,235	805	\$194,720	\$470,955
			Radio		0	\$0	0	\$0	\$0
			Newspaper		16 daily papers	\$11,598	0	\$0	\$11,598
			Total		835	\$287,833	805	\$194,720	\$482,553
	October 2007	Males 18-34	TV	78% / 6 (468)	1,187	\$156,361	955	\$181,959	\$338,320
			Radio	59% / 9 (531)	1,664	\$91,879	1,661	\$105,750	\$197,629
			Newspaper		4 major dailies	\$10,000	0	\$0	\$10,000
			Total		2,851	\$258,240	2,616	\$287,709	\$545,949
	May 2008	Males 18-34	TV	80% / 5.8 (464)	1,955	\$192,657	2,692	\$185,974	\$378,631
			Radio	60% / 8.7 (522)	1,663	\$93,135	1,847	\$122,618	\$215,753
			Newspaper		4 major dailies	\$13,432	0	\$0	\$13,432
			Total		3,618	\$299,224	4,539	\$308,592	\$607,816
Year 2	October 2008	Males 18-34	TV	83% / 5 (415)	1,522	\$170,174	2298	\$209,062	\$379,236
			Radio	61% / 8.8 (537)	1,626	\$91,120	1742	\$92,079	\$183,199
			Newspaper		4 major dailies	\$7,400	0	\$0	\$7,400
			Total		3,148	\$268,694	4040	\$301,141	\$569,835
	May 2009	Males 18-34	TV	87% / 6 (522)	1,979	\$178,960	2600	\$194,055	\$373,015
			Radio	60% / 11 (660)	1,801	\$85,516	2445	\$110,169	\$195,685
			Newspaper		4 major dailies	\$7,400	0	\$0	\$7,400
			Total		3,780	\$271,876	5045	\$304,224	\$576,100

2.1.3 Earned Media

WTSC hired an earned media contractor, Levich Advertising of Seattle, to coordinate all earned media activities. The contractor kept records of media contacts and monitored the various news media to determine the extent to which NTSBE activities were covered. The contractor recorded:

- Number of news media outlets (dailies, weeklies, television and radio) pitched the stories.
- Number of media outlets that picked up the stories.

- Number of time the stories ran (some media ran the story more than once).
- How the stories ran (as news, talk show, editorial content, a PSA, or on the web page).

The method used to obtain earned media involved localizing the message with information about which law enforcement agencies were participating and where and when the NTSBE patrols were operating. WTSC generated a fact sheet used to develop the press releases, facilitated local media interviews with law enforcement officers and, in some cases, held press events. Table 3 contains details about the earned media, and Appendix A shows several examples.

Table 3. Earned media pitched and picked up for each NTSBE campaign

Mobilization Date	Counties (Pitched/Picked Up)	Dailies (Pitched/Picked Up)	Weeklies (Pitched/Picked Up)	Television (Pitched/Picked Up)	Radio (Pitched/Picked Up)	Internet (Picked Up)	Total Stories	PSAs
May 2007	20/0	21/19	74/39	22/19	153/107	26	442	1,717
October 2007	19/0	19/11	76/29	22/17	108/61	19	215	737
May 2008	26/0	26/18	88/40	19/17	147/75	26	311	428
October 2008	23/0	21/13	80/31	19/16	164/94	23	424	705
May 2009	22/0	20/20	109/52	18/14	136/77	44	371	289

The Washington Department of Transportation maintains more than 150 variable message signs over freeways and highways that provide motorists with routine reminders and alerts (e.g., that they are approaching a collision). As a partner with WTSC’s safety programs, WSDOT agreed to place seat belt-related messages on these signs during the enforcement waves as shown in Figure 1.

Figure 1. Fixed location variable message sign



To further increase the reach and frequency of the seat belt message, WTSC contracted with companies to rent 8 by 8 feet (244 x 244 cm) variable message road signs and worked with law enforcement agencies to place the signs on busy roads in major cities. Figure 2 shows an example of a portable variable message sign used during the mobilizations.

Figure 2. Portable variable message sign



In addition, law enforcement agencies were willing to post orange pop-up signs near their patrols to increase the exposure to the message. The State also had 625 fixed road signs that carried seat belt law messages.

2.2 Nighttime Seat Belt Enforcement

Table 4 shows the NTSBE law enforcement budgets and agency participation data. The table includes information for the daytime 2006 CIOT mobilization for comparison.

Table 4. Enforcement budgets and effort expended

	Pre-NTSBE	NTSBE Year 1			NTSBE Year 2	
	May, 2006	May, 2007	Oct., 2007	May, 2008	Oct., 2008	May, 2009
Budget for enforcement	\$642,682	\$350,000	\$300,000	\$300,000	\$300,000	\$350,000
Spent for enforcement	\$559,555	\$288,353	\$282,540	\$306,528	\$304,440	\$348,327
Number of agencies	135	75	49	55	68	69
Hours requested	12,986	7,831	6,874	6,342	5,397	7,022
Hours worked	11,731	5,715	5,362	6,248	5,586	5,650

The NTSBE steering committee decided to divide the patrol budget among as many law enforcement agencies as possible to get the widest possible coverage of the State. The committee also asked agencies to conduct patrols in shifts no longer than 5 hours. Seventy-five law enforcement agencies, including multiple WSP troops, participated across the State during the first NTSBE blitz in May 2007. Participation during the remaining NTSBE campaigns ranged from 49 to 69 agencies. Appendix B provides a listing of participating agencies by campaign date.

In the beginning of the project, law enforcement expressed reluctance to conduct nighttime seat belt patrols because of a perceived difficulty of seeing unbuckled motorists at night. With the assistance of the WSP and the Seattle and Kennewick Police Departments, WTSC tested methods to determine how best to conduct nighttime seat belt enforcement. The procedure that seemed to work best was a stationary spotter patrol in which an officer stood next to a busy street at a well-lit intersection and observed traffic. When the observing officer spotted an unbuckled motorist, the patrol radioed ahead to another officer who then made the stop and issued the citation. WTSC developed an educational video and scheduled training luncheon meetings with law enforcement in nine cities (Vancouver, Olympia, Seattle, Bellingham, Wenatchee, Yakima, Tri Cities, Moses Lake, and Spokane). At the sessions, WTSC explained how to manage the patrols.

The patrols covered the major population centers and reached approximately 90% of the State’s population. Debriefings with officers indicated that the police became increasingly comfortable with night seat belt enforcement as the program progressed because of positive results and relaxed procedural restrictions.

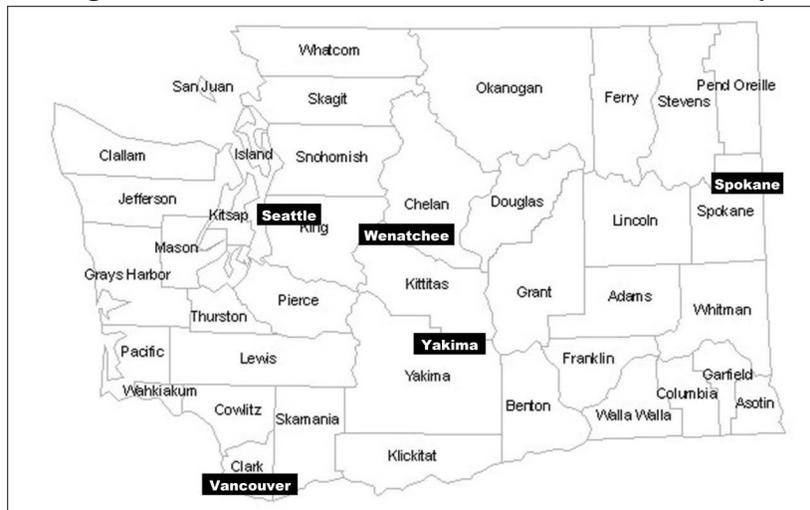
3. EVALUATION METHODS

The evaluation of the NTSBE program involved process data about publicity and enforcement activities, public awareness surveys, and observations of seat belt use at 40 sites across the State.

3.1 Public Awareness Survey

For many years, the WTSC has conducted pre and post surveys around their high-visibility enforcement campaigns to monitor whether drivers saw or heard messages. For the nighttime seat belt program, Washington Department of Licensing (DOL) conducted a survey of its customers in five offices across the State (East Spokane, Yakima, Seattle-Greenwood office, Wenatchee, and Vancouver) to assess awareness of NTSBE activities. Figure 3 shows the locations of the DOL survey offices.

Figure 3. Location for collection of awareness survey



The one-page paper-and-pencil survey covered self-reported seat belt use during day and night, exposure to NTSBE paid and earned media, and perceptions of nighttime enforcement levels (see Appendix C). Customers completed the survey as they waited to conduct a transaction. This approach provided a reasonably representative convenience sample of drivers across the State exposed to the NTSBE activities.

There were 12 waves of surveys at the five DOL offices over the entire two years of the project. Survey waves took place before and after the NTSBE media and enforcement campaigns, and each survey wave lasted two to three weeks. The survey dates:

- April 17, 2007 – May 5, 2007; Pre-Spring campaign
- June 5 – 29, 2007; Post-Spring campaign
- September 11 – 29, 2007; Pre-Fall campaign
- October 30, 2007 – November 17, 2007; Post-Fall campaign
- January 22, 2008 – February 2, 2008; Persistence measure
- March 25, 2008 – April 5, 2008; Persistence measure
- April 15, 2008 – May 3, 2008; Pre-Spring campaign
- July 15, 2008 – August 2, 2008; Post-Spring campaign
- September 30 – October 11, 2008; Pre-Fall campaign
- December 9 – December 20, 2008; Post-Fall campaign
- April 28 – May 9, 2009; Pre-Spring campaign
- June 9 – June 20, 2009, Post-Spring campaign.

The DOL collected 14,411 surveys over the 12 waves. The number of surveys collected at each site varied among the sites and across waves. Two of the sites had limited participation during some waves because of factors unrelated to the project such as road construction. Separate analyses examined changes for the key target demographic—18- to 34-year-old males.

3.2 Seat Belt Observations

The same contractor that Washington used for its annual daytime statewide observations collected the nighttime data across the State during both day and night hours.

3.2.1 Seat Belt Observation Sites

There were 40 observation sites in five counties (8 sites in each county) for day and night observations of seat belt usage. These 40 observation sites were a subsample of the larger statewide survey that the State conducts every year to calculate its seat belt usage rate and were located in the counties of Walla Walla, Mason, Yakima, Spokane, and Pierce (See Figure 4.). Washington used these 40 sites as an expeditious means to monitor seat belt use across the State at times other than the annual CIOT observations. The 40 sites have yielded a composite use rate similar to the total statewide survey rates.

Figure 4. Counties for seat belt observations



For the Spring NTSBE measurement periods, the daytime data for the 40 sites were extracted from the statewide surveys normally conducted by the State. All other day and night observations were collected specifically for this project. For each wave of these additional observations:

- Observers visited the sites in the same sequence, both day and night.
- Observers visited each site at approximately the same start time.
- Night observations occurred on the first Thursday and Saturday of the data collection period.¹
- Day observations took place on the second Thursday and Saturday of the data collection period.

The dates for the observations:

- April 26 - May 3, 2007; Pre-Spring NTSBE
- June 14 - June 23, 2007; Post-Spring NTSBE
- July 3 - August 4, 2007; Persistence
- September 13 - October 6, 2007; Pre-Fall NTSBE
- November 8 - November 17, 2007; Post-Fall NTSBE
- May 1 - May 11, 2008; Pre-Spring NTSBE
- June 5 - June 14, 2008; Post-Spring NTSBE
- October 8 - October 25, 2008; Pre-Fall NTSBE
- December 10 - December 16, 2008; Post-Fall NTSBE
- May 6 - May 16, 2009; Pre-Spring NTSBE
- June 11 - June 20, 2009; Post-Spring NTSBE
- July 1 - July 27, 2009; Persistence

¹ The timing of the day and night observations changed for several of the waves because of scheduling conflicts among the observers, but the basic measurement sequences and times were maintained. It is unlikely that these changes had a substantial effect on the results.

3.2.2 Daytime Observation Approach

A single observer conducted the daytime observations. Observers were instructed to stand in the same positions and to use the same observation methods they had been using for prior annual daytime seat belt surveys at the 40 sites. They observed seat belt use by drivers and outboard front seat passengers of cars, vans, SUVs, and pickup trucks. They observed belt use for 40 minutes at each site. Improper belt use (e.g., belt behind the back) was logged as non-use. Observers tallied their observations on sets of counters mounted in a 4 x 4 configuration on a clipboard. Each row represented a vehicle type (e.g., SUV). The columns from left to right were for driver belt use (yes/no) and front seat passenger belt use (yes/no). At the close of the data collection period at each site, observers transferred all data from the counters to the same type of data sheets used for the statewide survey.

One addition to the standard daytime observation protocol created a weighting factor based on vehicle volume for use in later analyses. Observers conducted a 10-minute count of vehicles passing the site immediately before they started the seat belt observations to create a “traffic volume” weighting factor. The pre-count provided an accurate estimate of the total traffic volume at a given site since the number of observations that an observer could record is not necessarily representative of total traffic flow, especially when flow is high. During the 10-minute count, the observers counted eligible vehicles (passenger cars, pickups, SUVs, and vans) passing in the direction that observations were being made. Observers then recorded the counts on a site count form and zeroed the counters before they started the seat belt observations. Using the pre-count as a weighting factor, however, was problematic when counts were low or even zero. Any data for a site with a zero pre-count (which did occur during some of the nighttime observations) would not be included in belt use rate calculation weighted by traffic volume.

3.2.3 Nighttime Observation Approach

During nighttime operations, observers worked as two-person teams due to the extra equipment (e.g., night vision goggles) and added difficulty of nighttime observations. One person observed belt use, and the other recorded the results as called out by the observer. They could alternate roles if both members of the team were equally familiar with both tasks, but they were told not to exchange roles during the collection at a particular site. The teams recorded the roles of each member at each site and adopted the same roles in each wave of observations.

Each team was issued a night vision scope² and a two-million candlepower infrared (IR) spotlight³ to use at those positions where there was insufficient ambient illumination to see belt use. The observers shined the IR light into the car and used the scope to view the driver and passenger. Since the light and scope operate outside the visible spectrum, vehicle occupants were not disturbed in any way and were not aware they were being illuminated.

The nighttime observation teams followed the same basic procedures as the day observers and recorded data for 40 minutes. Because of the increased dangers to an observer at night, the teams wore hard hats and high-visibility vests and placed a high-visibility “Survey Ahead” sign on the roadway approximately 100 feet in advance of the observation position. Observers made a 10-minute count of vehicles passing the site immediately before starting the observations.

² ITT model TM-F6015XA-1

³ Profiler II Golight

3.2.4 Site Location and Observation Issues

For the first wave of observations, the exact same 40 legacy sites were used both day and night. Due to a lack of nighttime traffic or observation difficulties at some of the sites during the nighttime, observers were allowed to move to new nearby positions in the subsequent waves of observations so long as they were viewing essentially the same or similar flow of traffic. The change in positions led to a substantial increase in the number of nighttime observations for the subsequent waves. The original 40 observation sites were unchanged for all waves of the daytime observations.

Another issue arose regarding the observation teams themselves. The contractor who normally directed the State's observational surveys was hired to conduct the surveys for this project. Unfortunately, the contractor fell ill during the project, prompting a change in management of the observation teams in May of 2008. Two of the original observer teams stayed on to continue the project, but three of the original observation teams had to be replaced. During May 2008, one of the new observation teams reported observed seat belt use rates that were substantially different from prior measurements at the same locations and were substantially different from the rates observed by other teams at the same time in other counties. The magnitude of the differences prompted the removal of the data for that one county from the May 2008 total. Therefore, the data presented for May 2008 include only four of the five counties, resulting in a smaller number of observations. Researchers conducted a refresher training session with all of the observers as a remedial measure, and, subsequently, the June 2008 observed seat belt rates in the problem county were consistent with the other counties and were included in the June 2008 total.

3.3 WTSC Law Enforcement Debriefings

At the end of the first year of the project, WTSC conducted debriefings with officers and managers from participating law enforcement agencies. WTSC spoke with law enforcement agencies with varying levels of participation in the NTSBE activities, and a few agencies that had withdrawn from the program. Participants spoke about their involvement in the nighttime seat belt enforcement project, the problems they encountered with the project, the perceived benefits of the increased nighttime enforcement, and their suggestions for future program improvement.

4. RESULTS

This section presents the results of the analyses of the various types of data collected for the evaluation of the NTSBE program.

4.1 Citations Issued

Citations are the primary measure of the enforcement activity. Table 5 shows the counts of citations issued during the NTSBE campaign periods, the citations issued per hour of enforcement for each enforcement wave and daytime 2006 CIOT data for comparison purposes.

Law enforcement officers issued 4,516 seat belt citations during NTSBE activities in May 2007, 3,822 in November 2007, 5,194 in May 2008, 2,931 in October 2008, and 4,258 in May 2009. These numbers are substantially lower than the 21,658 citations issued during the

daytime statewide May 2006 CIOT campaign. The total number of participating agencies was two to three times higher for the 2006 CIOT campaign as were the total hours worked and budget. Daytime seat belt enforcement proceeds more quickly than nighttime enforcement.

Citations per hour are another way to examine the general efficiency of the nighttime versus daytime campaigns. During the May 2006 daytime CIOT campaign, law enforcement issued 0.84 seat belt citations per hour. Overall, the nighttime seat belt citation rates per hour were only slightly lower -- 0.80 per hour in May 2007, 0.71 in October 2007, 0.83 in May 2008, 0.53 in October 2008, and 0.75 in May 2009. Of the nighttime waves, the October 2008 campaign produced lower seat belt citation rates, which may be related to the colder weather in Washington at that time.

Table 5 also shows that the nighttime campaigns resulted in a higher rate of DUI citations and felony arrests per hour of enforcement than did the May 2006 daytime campaign. The May 2006 daytime campaign, however, netted substantially more speeding violations per hour worked than did the nighttime campaigns. Some of the variation in the types of citations issued per hour is likely due to differences in nighttime and daytime enforcement strategies. The NTSBE stationary strategy is less likely to identify speeding offenses since the observing officer is usually on foot at an intersection without any speed measuring equipment. Other differences, such as the rate of DUI citations, can be attributed to the different populations that are driving during the day and night. Another section of this report explores these differences.

Table 5. Contacts and citations issued per hour of enforcement

	Pre-NTSBE		NTSBE Year 1						NTSBE Year 2			
	May, 2006		May, 2007		October, 2007		May, 2008		October, 2008		May, 2009	
	Totals	Citations Per Hour Worked	Totals	Citations Per Hour Worked	Totals	Citations Per Hour Worked	Totals	Citations Per Hour Worked	Totals	Citations Per Hour Worked	Totals	Citations Per Hour Worked
Total citations	21,658	1.846	6,756	1.182	5,322	0.993	7,228	1.157	5,416	0.970	6,225	1.102
Seat belt (SB)	9,892	0.843	4,516	0.790	3,822	0.713	5,194	0.831	2,931	0.525	4,258	0.754
SB warnings			359	0.063	606	0.113	811	0.130	722	0.129	1,000	0.177
Child car seat (CCS)	276	0.024	166	0.029	181	0.034	257	0.041	155	0.028	170	0.030
CCS warnings							29	0.005	39	0.007	156	0.028
Aggressive driving	611	0.052	122	0.021	45	0.008	81	0.013	98	0.018	66	0.012
Reckless/negligent	24	0.002	39	0.007	12	0.002	17	0.003	32	0.006	41	0.007
DUI	108	0.009	143	0.025	83	0.015	105	0.017	121	0.022	87	0.015
Other alcohol	68	0.006	66	0.012	35	0.007	65	0.010	95	0.017	32	0.006
Drug arrests	150	0.013	138	0.024	78	0.015	67	0.011	102	0.018	69	0.012
Felony arrests	38	0.003	26	0.005	43	0.008	128	0.020	27	0.005	4	0.001
Felony warrants	83	0.007	40	0.007	21	0.004	41	0.007	39	0.007	25	0.004
Other warrants	283	0.024	124	0.022	134	0.025	158	0.025	144	0.026	99	0.018
Suspend/revoked	794	0.068	300	0.052	282	0.053	444	0.071	382	0.068	339	0.060
Uninsured	2,091	0.178	635	0.111	478	0.089	583	0.093	641	0.115	699	0.124
Stolen cars	23	0.002	8	0.001	4	0.001	5	0.001	15	0.003	3	0.001
Other criminal	384	0.033	123	0.022	110	0.021	172	0.028	222	0.040		
IDL			9	0.002	14	0.003	7	0.001	28	0.005	18	0.003
Speeding	7,655	0.653	626	0.110	190	0.035	590	0.094	497	0.089	506	0.090
Hours worked	11,731		5,715		5,362		6,248		5,586		5,650	
Total contacts	36,378	3.101	10,380	1.816	7,517	1.402	11,329	1.813	10,121	1.812	10,845	1.919

4.2 Awareness Survey in DOL Offices

WTSC has conducted pre and post surveys for many years to monitor the effectiveness of WTSC's high-visibility enforcement campaigns in seat belts, impaired driving, and aggressive driving and provided these data. Washington's Department of Licensing collected 14,411 surveys in the five licensing offices. The DOL questionnaire asked for age and sex demographic information as a check to assure that generally the same types of people completed the survey in each of the waves. There were no noteworthy differences in these demographic variables among the 12 data collection waves. Table 6 shows that the ages of survey respondents were a reasonable representation of the licensed drivers in Washington. Overall, 50% of the survey respondents were female and 50% male compared to 48% and 52%, respectively, of the licensed drivers. There appeared to be proportionally more young drivers at the driver licensing offices compared to the population of licensed drivers, leading to more respondents in the high-risk target population age of under 35.

Table 6. Age of awareness survey respondents versus licensed drivers

Age	Nighttime Seat Belt Enforcement Driver Licensing Office Surveys			Washington State Licensed Drivers		
	Number	Percent	Cumulative Percent	Number	Percent	Cumulative Percent
Under 21	1,316	9%	9%	293,798	6%	6%
21-25	2,096	15%	24%	443,463	9%	15%
26-34	2,614	18%	42%	812,800	17%	32%
35-49	3,769	26%	68%	1,447,666	30%	61%
50-59	2,047	14%	83%	901,914	18%	80%
60+	2,492	17%	100%	981,702	20%	100%
Total	14,334	100%		4,881,343	100%	

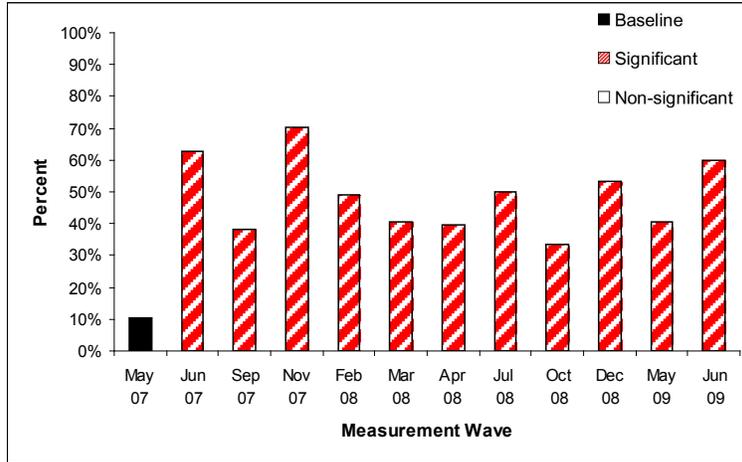
Notes: 77 of the 14,411 respondents did not report age on the survey. DOL provided counts of drivers with valid Washington licenses and residences in 2007.

Figures 5 through 26 present the DOL survey responses for the sample as a whole (N=14,411) and for the high-risk drivers, males 18- to 34 years old (N=2,739). Percentages are based on the number of valid responses. The figures show key survey items and items where subsequent waves resulted in statistically significant changes from the baseline. A black bar represents the baseline measurement period, and white bars represent non-significant ($p > 0.05$) changes from the baseline measure. Striped bars represent significant changes from baseline ($p < 0.05$).

As seen in Figure 5, there were substantial increases in the percentage of respondents who reported reading, hearing, or seeing something about nighttime seat belt enforcement from the baseline wave to the later waves. The percentage who reported that they saw or heard at least some of the media was significantly higher than baseline after each wave of enforcement and messaging. Awareness, which began at 10% at the baseline, reached a high of 70% in November 2007, and it remained significantly above baseline thereafter. As seen in Figure 6, the 18- to 34-

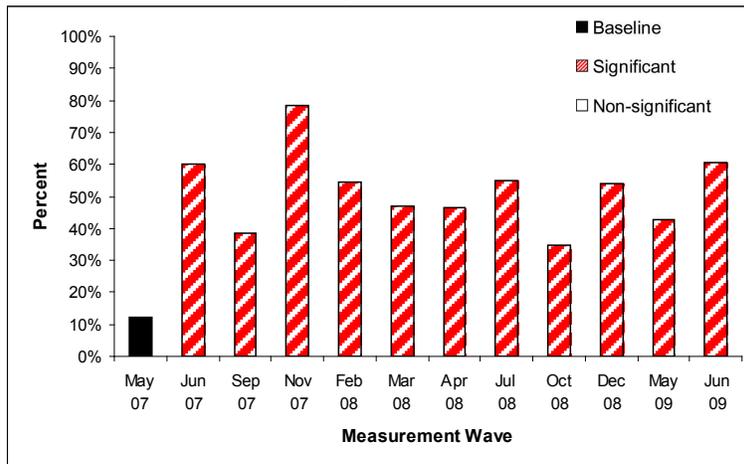
year-old males followed a similar pattern of awareness with a peak of 78% also in November 2007.

Figure 5. Recently read, heard or saw anything about nighttime seat belt enforcement



Note: N=13,913 of 14,411 respondents.

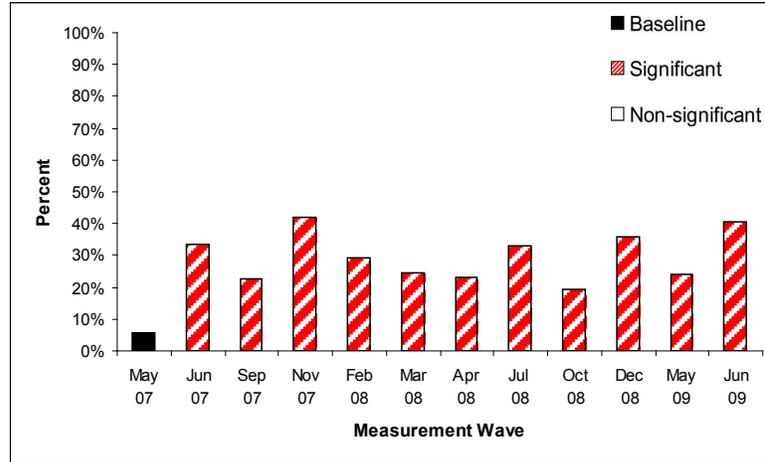
Figure 6. Recently read, heard or saw anything about nighttime seat belt enforcement (18- to 34-year-old males)



Note: N=2,631 of 2,739 respondents.

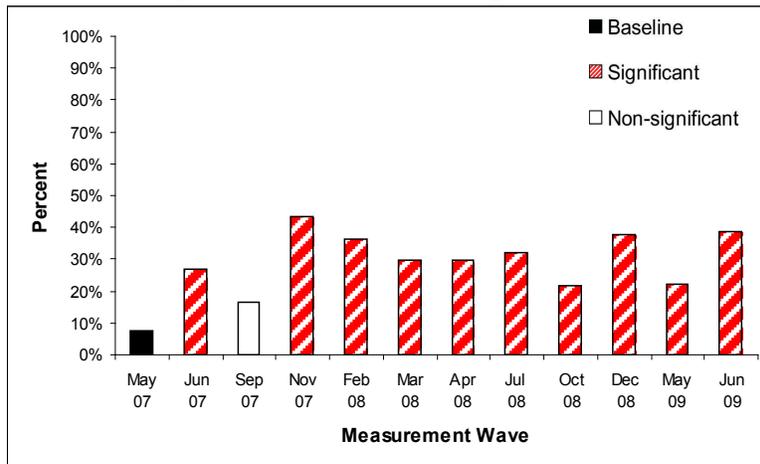
Respondents could select multiple responses if they saw, heard, or read a message in more than one medium; television, radio, road signs, newspapers, billboards, brochures, and police all showed statistically significant increases above baseline. Television had the highest level of exposure. As shown in Figure 7, the post-baseline average was 29%, and the increase over baseline was statistically significant in all subsequent waves. Figure 8 shows that awareness from television for the 18- to 34-year-old males was similar to the general population and also had a post-baseline average of 29%.

Figure 7. Saw or heard nighttime seat belt message on TV



Note: N=14,411 of 14,411 respondents.

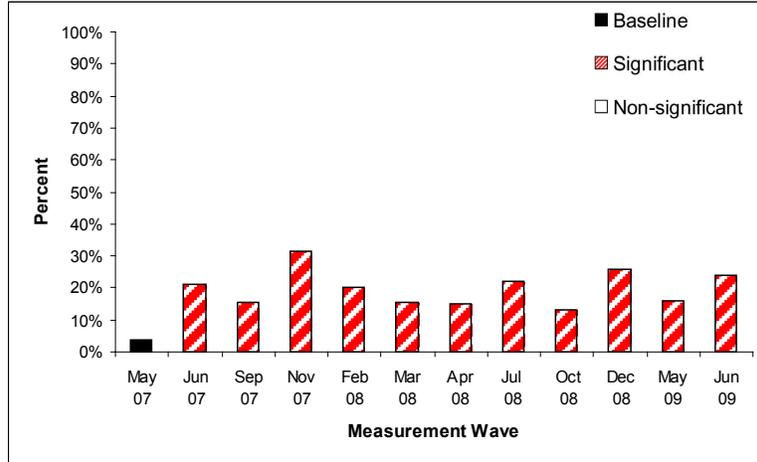
Figure 8. Saw or heard nighttime seat belt message on TV (18- to 34-year-old males)



Note: N=2,739 of 2,739 respondents.

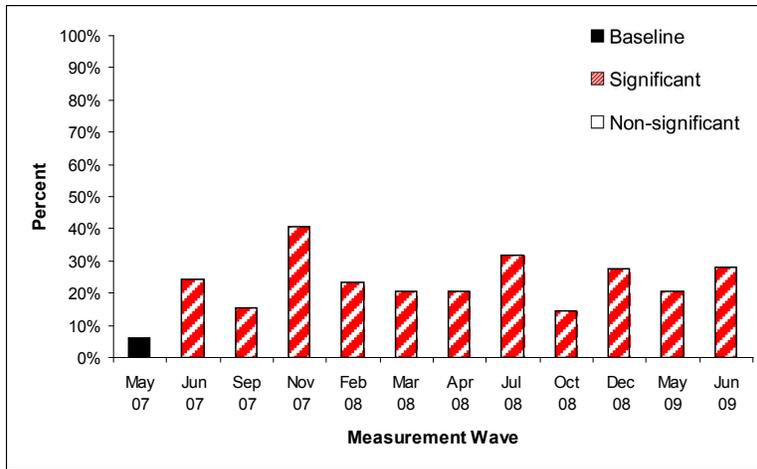
Radio has the second highest level of exposure with a post-baseline average of 20%. As shown in Figure 9, the increase over baseline was statistically significant in all subsequent waves. Figure 10 shows that 18- to 34-year-old males tended to have more exposure to radio with a post-baseline average of 23%.

Figure 9. Heard nighttime seat belt message on radio



Note: N=14,411 of 14,411 respondents.

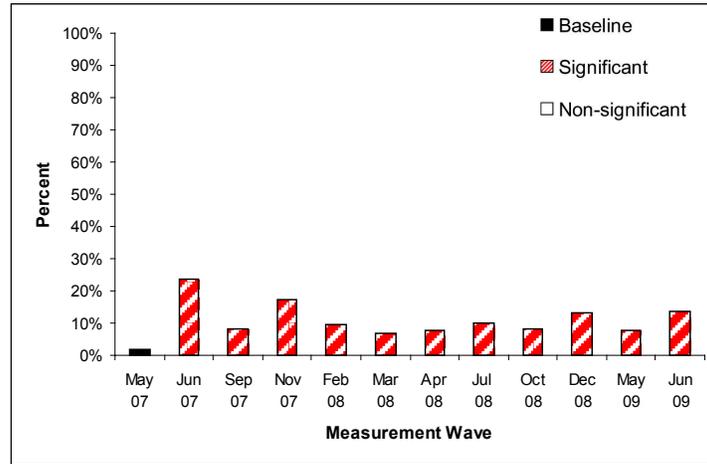
Figure 10. Heard nighttime seat belt message on radio (18- to 34-year-old males)



Note: N=2,739 of 2,739 respondents.

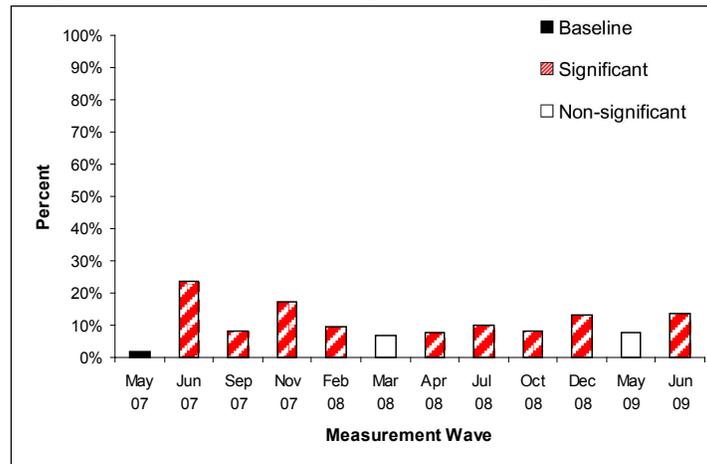
Road signs had the third highest level of exposure with a post-baseline average of 12%. As shown in Figure 11, the increase over baseline was statistically significant in all subsequent waves. Figure 12 shows that 18- to 34-year-old males tended to have more exposure to road signs with a post-baseline average of 24%, but the increase over baseline did not achieve statistical significance in two waves.

Figure 11. Saw nighttime seat belt message on road sign



Note: N=14,411 of 14,411 respondents.

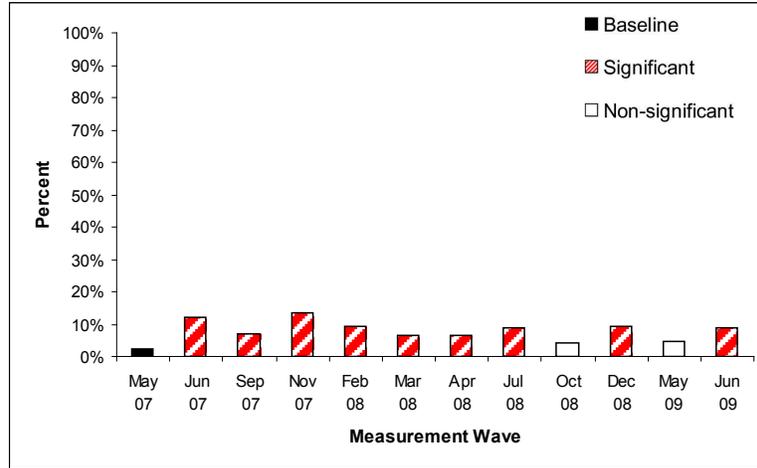
Figure 12. Saw nighttime seat belt message on road sign (18- to 34-year-old males)



Note: N=2,739 of 2,739 respondents.

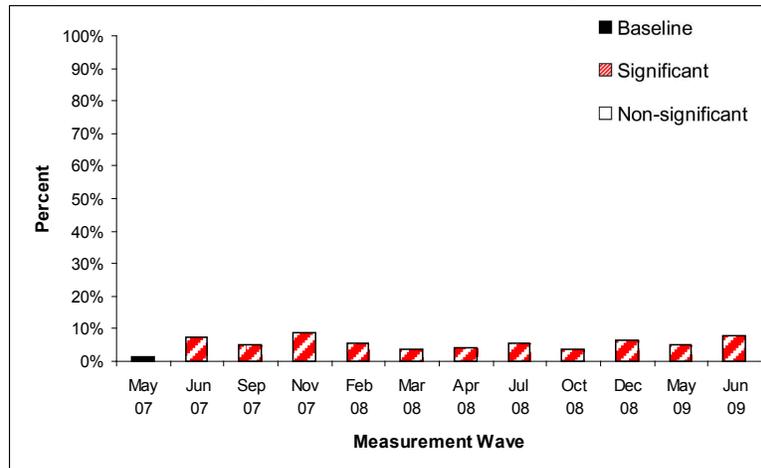
Newspapers and billboards had the fourth and fifth highest levels of exposure. As seen in Figure 13, the post-baseline average for newspapers was 8%. As seen in Figure 14, the post-baseline average for billboards was 6%. The patterns for 18- to 34-year-old males were similar but did not tend to have statistically significant increases over the baseline due to a small sample size relative to the size of the effect. That said, there is some evidence that the 18- to 34-year-old males had less exposure to newspapers than the general population with a post-baseline average of only 6%.

Figure 13. Saw nighttime seat belt message in newspaper



Note: N=14,411 of 14,411 respondents.

Figure 14. Saw nighttime seat belt message on billboard

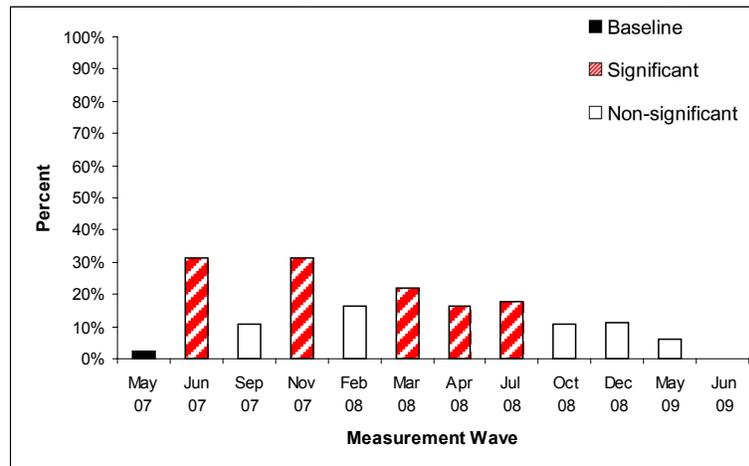


Note: N=14,411 of 14,411 respondents.

When WTSC started an Internet campaign in September 2007, the survey added Internet. Only 49 respondents selected Internet, a sample too small to support meaningful analysis. Similarly counts for those who received the message from police or from brochures were too small for analysis but are detailed in Appendix D.

The survey asked people who had seen media to write in what the media said. Less than half of the people who said they saw media responded to this item. Of those who responded, there was a significant increase in the percentage who wrote that the message was about nighttime enforcement (Figure 15). Those who wrote that the message was about nighttime enforcement increased from 2% in May 2007 (baseline) to 31% in June 2007 and again in November 2007. In February 2008, this percentage dropped below 20% and stayed near that level before dropping off again for the final measures. Very few people wrote answers in the final waves. The increase for 18- to 34-year-old males appeared to be similar, but the changes were not statistically significant.

Figure 15. Recall of nighttime enforcement message theme



Note: N=2,704 of 14,411 respondents.

Of those who responded, there was little change in the percentage of the total sample and of the young males who mentioned *Click It or Ticket*. For both the general population and the young males, only one of the eleven subsequent waves demonstrated a statistically significant increase over baseline.

The survey asked respondents “*When you pass a driver stopped by the police in the daytime, what do you think the stop was for?*” The overwhelming response, nearly 9 in 10 (90%) of all respondents for each wave, was speeding. The percentage of all respondents and young males saying a stop was for a seat belt violation started at 3% in the baseline and did not achieve a statistically significant increase over the baseline during the program.

The survey also asked respondents “*When you pass a driver stopped by the police at night, what do you think the stop was for?*” Speeding still remained the top choice for nearly half (50%) for both the total sample and the young males in all waves. The second most frequent

response was “*drunk driving*,” averaging about 37% for each wave in both groups. The percentage of all respondents and young males saying a stop was for a seat belt violation started at 1% in the baseline and did not achieve a statistically significant increase over the baseline during the program.

The majority of the total sample, nearly 95% each wave, reported that they wear their seat belt with the same frequency day and night. Approximately 4% of each wave said they wore their seat belt “*more*” at night, and the remainder said they wore it “*less*.” Slightly fewer (90%) of the 18- to 34-year-old males said they wore their seat belts with the same frequency day and night. An average of just over 7% across all waves of this target group said they wore their belts “*more*” at night, and almost 3% on average indicated lower belt use at night. The survey asked respondents who indicated they wore belts more or less at night why they did so, but there were too few responses to analyze.

The survey asked respondents “*how often do you wear a seat belt during the day?*” The percentage of the total sample for each wave that said “*always*” was between 92 and 95% with the exception of a dip to 83% in one wave (October 2008). “*Always*” responses for the 18- to 34-year-old males fluctuated between 79 and 93 across waves. There is no apparent explanation for this variability.

The survey then asked respondents “*how often do you wear a seat belt at night?*” Percentages for the total sample who responded “*always*” did not achieve a statistically significant increase over the baseline of 95% in any subsequent wave. Likewise, percentages for the young males who responded “*always*” did not achieve a statistically significant increase over the baseline of 92% in any subsequent wave.

The survey asked respondents “*Have you increased your seat belt use recently?*” Approximately 15 to 20% of the total sample each wave said “*yes*.” For the 18- to 34-year-old males, an average of almost one-quarter (24%) said “*yes*,” but this was the same rate as in the baseline. When asked why they increased seat belt use recently, the most common response was, “*It’s the law*,” although the number of any one response was small.

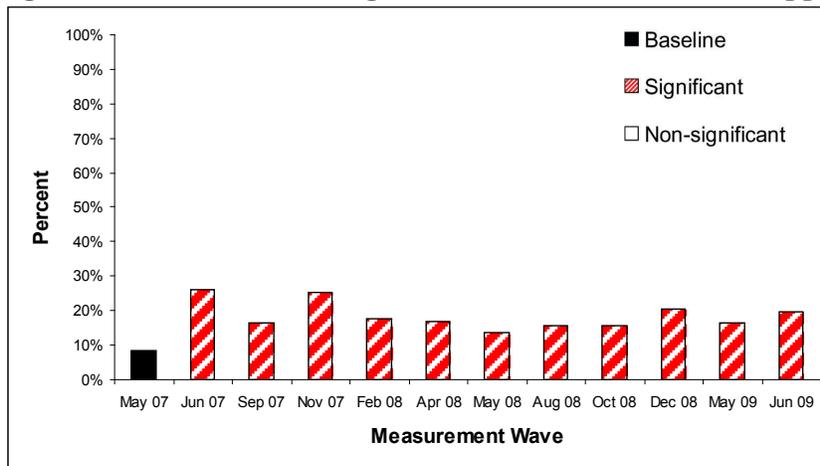
When the survey asked “*How strictly do you think the police enforce the Washington seat belt law during the day?*” about half (48%) of the total sample said “*very strictly*” at the baseline. This response peaked at just over 56% percent during September 2007 before dropping back to the 40 – 50% range for the other measurement periods. The 18- to 34-year-old males followed a similar pattern beginning at almost 48% saying “*very strictly*,” increasing by as much as 10 percentage points in the first five post-baseline waves and then dropping back to around the initial value. A companion question asked “*How strictly do you think the police enforce the Washington seat belt law during the night?*” At baseline between 45% and 50% of both the total sample and 18- to 34-year-old males, respectively, said “*very strictly*”. The responses for all other waves remained at about those levels.

The next question asked whether the respondent had ever been stopped by the police for not wearing a seat belt during the **day**. There were slight increases in the percentage of the total sample that said, “yes, I got a ticket” from just under 8% at baseline to slightly over 11% after the May 2007 campaign. Thereafter, the percentages stayed around 9% to 10%. The 18- to 34-year-old males began at baseline with over 14% reporting a daytime seat belt ticket. This percentage peaked at 22% in September 2007 and then slid back to around the baseline value by the end of the campaign.

The survey asked the same question for **night**, and the percentage who answered “yes, I got a ticket” started at 1% and peaked at 3% in October 2008. The rest of the waves varied between 1% and 3%. For the 18- to 34-year-old males, just fewer than 3% said they had been stopped and ticketed for a seat belt violation during the baseline. This increased to over 7% in September 2007 and stayed above baseline for all of the subsequent waves except March 2008 when it dropped below baseline. Only 109 of the 18- to 34-year-old males reported they received a night seat belt ticket across all measurement waves.

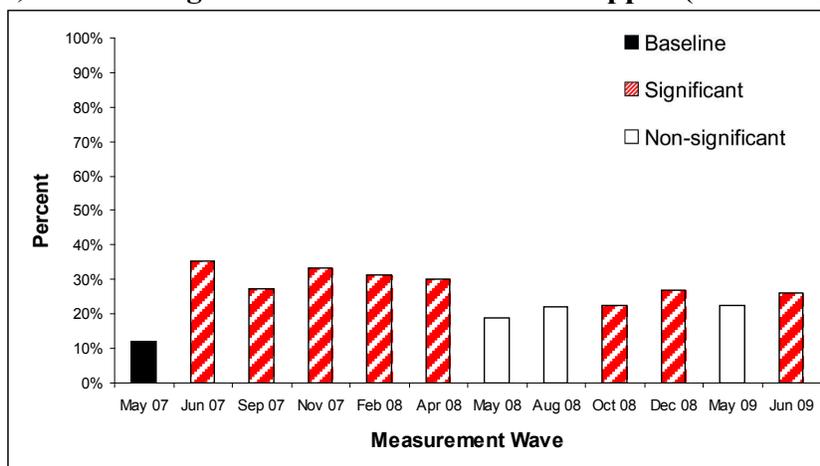
A subsequent item asked, “Have you recently noticed increased enforcement of the seat belt law at **night**?” Significantly more people in the total sample indicated, “yes, I noticed but wasn’t stopped,” from 8% in May 2007, 26% in June 2007, 16% in September 2007, and 25% in November 2007. Between 13% and 21% of the total respondents said they had noticed increased enforcement but were not stopped in the 2008 and 2009 waves (see Figure 24). The target group of young males reported noticing more enforcement than did all other drivers (Figure 25). In June 2007, for example, over 35% of the 18- to 34-year-old males reported seeing nighttime enforcement but were not stopped.

Figure 16. Yes, I noticed night enforcement but wasn’t stopped



Note: N=13,899 of 14,411 respondents.

Figure 17. Yes, I noticed night enforcement but wasn't stopped (18- to 34-year-old males)



Note: N=2,653 of 2,739 respondents.

Another item asked, “How often do you think you would get a ticket in Washington if you did not wear your seat belt during the day?” The percentage who said “always,” stayed in the low 30% range for all waves for all respondents, and slightly lower (29%) for young males. Answers to an analogous item about night ticketing showed a similar pattern with the percentage who said “always” staying near in the low 30% range for all respondents and slightly lower (28%) for young males throughout the study.

A final question asked, “If you were to drink too much to drive safely, what percentage of the time would you be stopped by the police for drunk driving during the day?” There were no notable differences over time. Almost one-quarter of the total sample (24%) and of the primary target group (22%) said “100% of the time;” about one-fifth (18%) of both groups said “75% of the time;” or (22%-23%) “50% of the time.” About one-tenth (11-12%) said “25% of the time;” one-twentieth (5-7%) said “10% of the time;” one-tenth (8-10%) said “less than 10% of the time;” and (8%) of both groups said “0% of the time.” Almost two-thirds of both groups (64%, 63%) said 50% of the time or more.

The survey asked the same question about the probability of being stopped for drunk driving at night. There were no notable differences over time, but averaged across all waves and for both groups, the probability of being stopped for drunk driving was higher at night. For example, 29% of the total sample and 28% of the young males said “100% of the time” at night compared with about 24% and 22%, respectively for the equivalent daytime question.⁴

These public awareness surveys confirm that the media and enforcement campaigns reached Washington drivers, especially the primary target audience of 18- to 34-year-old males. After each of the intervention periods, there were increases in the percentages of respondents

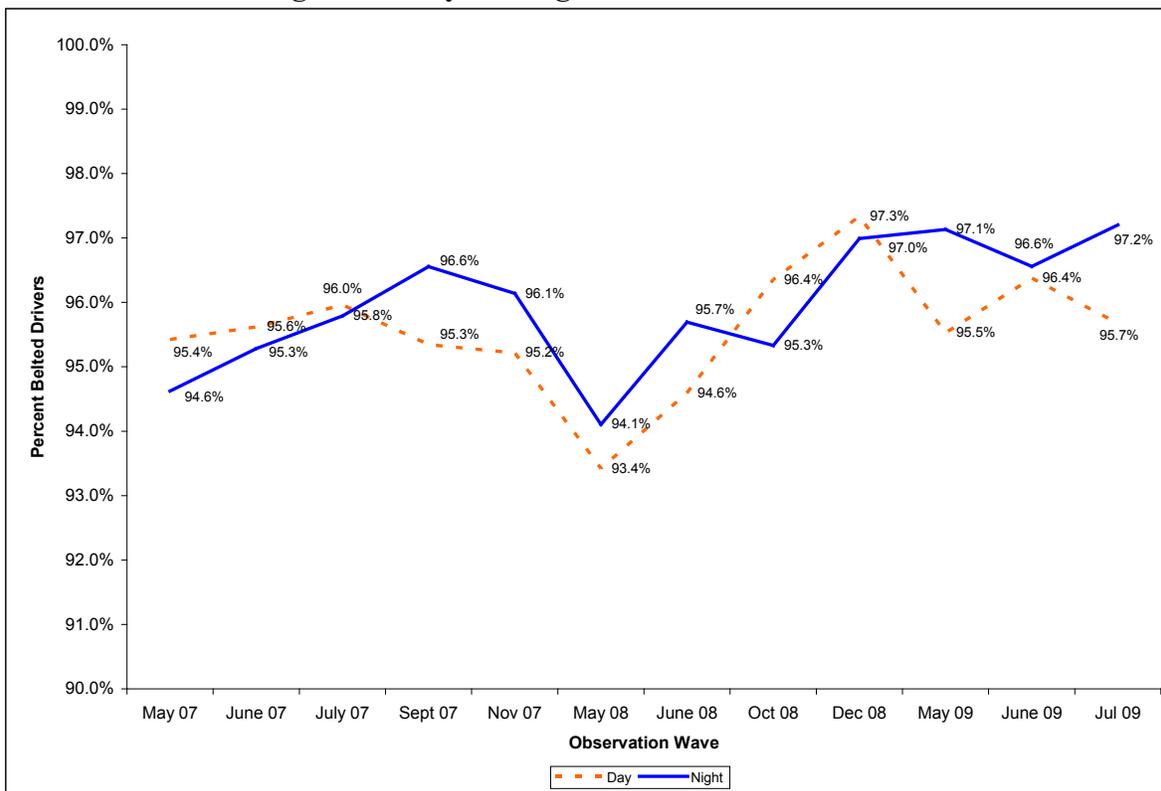
⁴ Data entry personnel noted that quite a few of the respondents who chose “0% of the time” for both the day and night alcohol items wrote in the margin that they do not drink alcohol. Therefore, it is not clear if a “0%” response indicated that they thought police would not stop drunk drivers, or that they themselves would never be stopped since they did not drink alcohol.

who said they had read, seen, or heard any media about nighttime time seat belt enforcement and those who noticed increased seat belt enforcement at night. Most respondents said that they, personally, were not stopped for a violation. There were no changes in self-reported belt use. This is not surprising given the extremely high seat belt use rates both day and night in Washington.

4.3 Mini-Site Seat Belt Observation Results

Given the issues with low pre-counts during night hours and the lack of available pre-counts for the daytime data extracted from the statewide survey, researcher only analyzed the unweighted data from the 40 mini-survey sites. Figure 18 displays day and night belt use for all 40 sites combined. A chi-square test of independence on **daytime** belt use indicated that observed belt use varied significantly across waves, but not monotonically ($\chi^2(11, N = 84,658) = 84.74, p < 0.05$). Standardized-adjusted residuals indicated that belt use was higher than expected during Waves 8, 9, and 11 (October 2008, December 2008, and June 2009) and lower than expected during Waves 6, 7, and 10 (May 2008, June 2008, and May 2009). However, a test for linear trend on the daytime belt use data indicated that, on average, belt use was 0.06 percentage points higher for each subsequent observation wave ($p < 0.05$).

Figure 18. Day and night seat belt use at 40 sites



A similar chi-square test of nighttime observed belt use indicated that belt use varied significantly across waves, but, as with the daytime data, not in a monotonic fashion ($\chi^2(11, N = 63,248) = 105.77, p < 0.05$). Standardized-adjusted residuals indicated that belt use

was higher than expected during Waves 10, 11, and 12 (May 2009, June 2009, and July 2009) and lower than expected during Waves 1, 2, 7, and 8 (May 2007, June 2007, June 2008 and October 2008). A test of linear trend indicated that nighttime seat belt use was, on average, 0.14 percentage-points higher during each subsequent observation wave ($p < 0.05$). A t-test comparing the linear trends between daytime and nighttime belt use indicated that the nighttime trend was reliably higher than that observed during the daytime hours, suggesting that NTSBE had a larger effect on nighttime belt use than on daytime belt use ($p < 0.05$). Together these results suggest that NTSBE was associated with increased observed belt use over time during both the daytime and nighttime and that the increase was larger during the nighttime hours.

4.4 Annual Statewide Observations of Daytime Seat Belt Use

It was unknown whether shifting CIOT resources to the nighttime would affect daytime seat belt use. Washington’s daytime use rate climbed slightly from 96.4% in 2007 to 96.5% in 2008 and then dropped back to 96.4% (Table 7). Although the 40-site subsample results suggested that daytime belt use might have increased slightly, the official statewide number showed no change during daylight hours. The official statewide survey has more than 10 times as many sites as the mini-sample surveys, provides the best representation of daytime seat belt use across the State, and is less prone to error. Belt use rate as measured by either the statewide or 40-site subsample started and remained extremely high.

Table 7. Washington Daytime Seat Belt Use Rates (2004-2013)

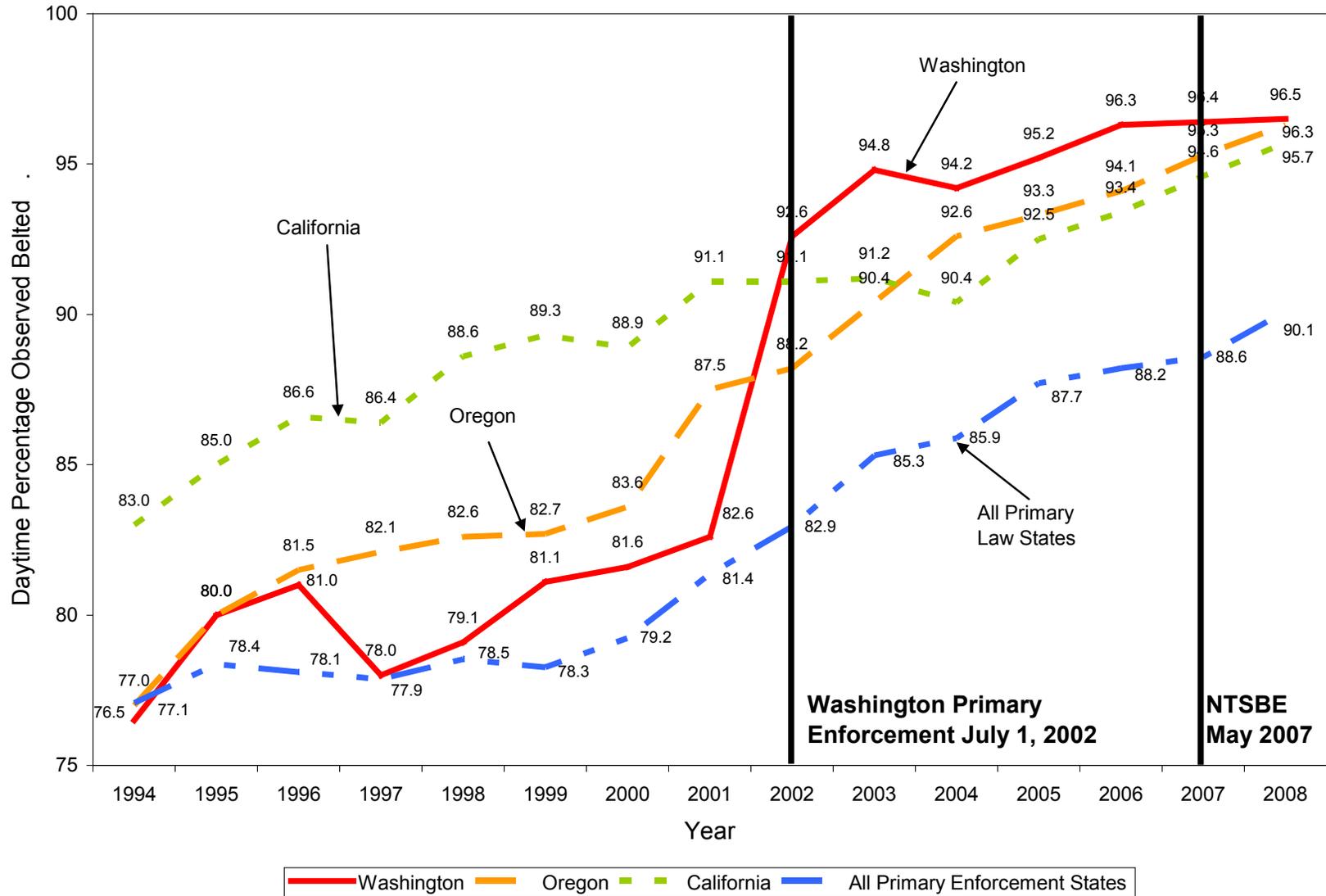
Year	Belt Use Rate
2004	94.2%
2005	95.2%
2006	96.3%
2007	96.4%
2008	96.5%
2009	96.4%
2010	97.6%
2011	97.5%
2012	96.9%
2013	94.5%

To investigate further the impact of NTSBE on daytime seat belt use, a set of ARIMA⁵ analyses compared the 1994 to 2008 daytime seat belt use rates for Washington alone, to nearby primary law States (Oregon and California) and to all other primary enforcement jurisdictions combined. These analyses help address the question of whether the trends in Washington were similar to other States or due to particular interventions like Washington’s primary law or the nighttime program. Oregon and California also have primary enforcement laws and both have seat belt use rates in the mid 90’s that, like Washington, have been steadily increasing. However, neither State conducted nighttime seat belt enforcement programs. Observed daytime belt use

⁵ ARIMA (autoregressive integrated moving average) models are used to forecast a time series and to determine if that series was perturbed or “interrupted” at a point in time (or over a period of time) when an intervention was underway. The interested reader is referred to Liu (2006) or Yaffee (2000) for a more detailed explanation.

rates, as reported annually to NHTSA, were weighted by the number of licensed drivers in each State. Figure 19 shows daytime belt use as well as the dates of Washington's primary enforcement law and the start of NTSBE activities. Data for 2009 were not included because the licensed driver numbers were not available at the time this report was prepared.

Figure 19. Observed Daytime Seat Belt Use for Washington, Oregon, California, and All Primary Enforcement States 1994 – 2008 (Source: Annual Statewide Observational Surveys reported to NHTSA)



Separate ARIMA analyses compared Washington’s observed belt rates to the other series to determine the impact of the primary law and NTSBE. Table 8 shows the full results of these ARIMA analyses. When analyzed without a control series (Washington data alone), Washington’s observed daytime belt use was an estimated 14.6 percentage points higher after primary enforcement was enacted ($p < 0.05$) but not statistically significantly higher after NTSBE ($p > 0.05$).

Table 8. Summary of ARIMA Analyses for Washington Observed *Daytime* Occupant Belt Use (Annual Statewide Observational Surveys), 1994-2008

Model component	Parameter	Lag	Estimate	<i>T</i>	<i>p</i>
Washington with no control series					
Primary enforcement	ω	0	14.6325	16.56	<.0001*
NTSBE	ω	0	1.8300	1.41	.1839
Constant			79.9875	145.95	<.0001*
Washington controlling for Oregon comparison series					
Primary enforcement	ω	0	9.3732	17.39	<.0001*
NTSBE	ω	0	-0.2347	-0.33	.7482
Oregon series	B	0	0.5438	11.46	<.0001*
Noise	MA	2	0.9955	2.93	.0150*
Constant			35.2969	9.16	<.0001*
Washington controlling for California comparison series					
Primary enforcement	ω	0	11.8023	18.15	<.0001*
NTSBE	ω	0	-0.0891	-0.10	.9223
California series	B	0	0.6547	7.08	<.0001*
Noise	MA	2	0.6346	2.57	.0279*
Constant			22.7203	2.83	.0178*
Washington controlling for all other primary jurisdictions comparison series					
Primary enforcement	ω	0	7.3594	20.65	<.0001*
NTSBE	ω	0	-2.2195	-2.61	.0242*
All primary states	B	0	1.0172	582.15	<.0001*
Noise	MA	2	0.9779	4.82	.0005*

Note. The interventions were modeled as sudden-permanent effects. * $p < 0.05$, two-tailed.

When Oregon’s daytime belt use was used as a control series for Washington, enactment of primary enforcement in Washington was found to be associated with a 9.4 percentage-point increase in day time belt use ($p < 0.05$), but not during the NTSBE ($p > 0.05$). When California belt use was used as a control series, enacting primary enforcement in Washington was found to be associated with a statistically significant 11.8 percentage-point increase in daytime belt use ($p < 0.05$), but, not during the NTSBE ($p > 0.05$). Both Oregon and California daytime belt use were found to be associated with Washington belt use ($p < 0.05$).

When all other primary enforcement jurisdictions were used as the control series, enacting primary enforcement in Washington was found to be associated with a statistically significant 7.3 percentage-point increase in belt use, and NTSBE with a 2.2 percentage-point decrease in daytime belt use ($p < 0.05$). This latter finding reflects the fact that daytime belt use increased about 2 percentage points across all the primary jurisdictions series during the period of NTSBE but was flat in Washington during this period. Hence, this effect represents a lack of increase in Washington relative to that observed in the other primary jurisdictions, which was lower than Washington's, rather than an actual decrease in daytime Washington belt use.

Overall, the analyses of daytime observed belt use from annual surveys suggest NTSBE was not associated with reliably higher or lower *daytime* belt use in Washington. The results for daytime seat belt use are consistent with both the intent of passage of a primary law and the focus of the NTSBE activities.

4.5 Key Officer Debriefing Points and Summary

The comments were generally homogeneous with little variation by area of the State or by type of police agency. Researchers grouped the comments into the categories of overall benefits, applicability to other jurisdictions, effects on law enforcement and on the public, the awareness campaign, and legal and operational issues.

Overall benefit. Every participant agreed that the NTSBE project was beneficial to both the public and to law enforcement agencies. The increase in the number of officers on the roadway at night led to more citations for non-use of seat belts and to a wide variety of other citations and arrests that normally would not have occurred. Officers universally agreed that the NTSBE project had increased the level of attention they and others in their agencies give to enforcement of seat belt use at night. If nothing else, the officers noted that stopping drivers for non-use of seat belts provided a valid probable cause to find other violations.

Applicability to other States. All participants thought that other States would benefit from using a similar or slightly modified approach to nighttime seat belt enforcement. Officers suggested that the stationary spotter approach that was initially mandated as part of the NTSBE project might be especially beneficial in States where belt use is lower where it would be easier to find unbelted drivers simply because of their greater prevalence.

Effects on law enforcement. Almost all Washington officers said that stopping drivers for improper or non-use of seat belts sometimes led to the discovery of other more serious violations such as impaired driving. Officers emphasized education over tickets when they observed improper seat belt usage. Participants felt the project was a great team-building experience, especially when they were able to choose their teams for the patrols. Ticketing for non-belt use is now part of normal day and night activities for most agencies that have participated in the nighttime patrols. The participants agreed that nighttime enforcement is effective and should be continued to maintain Washington's high seat belt usage rate.

Effects on the public. Officers indicated they stopped a cross-section of the public, though some officers said there were more male violators than female. Some officers believed increased nighttime enforcement pushed crime out of certain areas. They reported some comments from the public that officers should be “spending their time on more important things,” and officers described how they used the seat belt stops to educate people who had this opinion.

The publicity campaign. The officers thought the publicity campaign was pervasive and effective. They reported comments from stopped drivers to the effect that they saw or heard the messages but forgot to act on them, or in a few cases, simply stated it was their right not to wear a seat belt. Officers said that the campaign would be nearly impossible and ineffective without the publicity. Everyone agreed that publicity in Spanish would be an excellent way to reach Washington’s migrant population. Another suggestion was to use local celebrities and personalities to do the public service announcements. Officers thought that the media should be encouraged to discuss improper belt use more often. They reported some negative press from local newspapers in a few areas, although overall, the media response was positive. Some agencies preferred to use their own public information officers to communicate with the local media while others worked with WTSC’s press releases.

Courts and legal issues. Officers reported that the reaction of the judicial system to the nighttime seat belt tickets varied across counties. For example, in one location the courts insisted that spotters had to co-sign tickets or the tickets would be dismissed. Some agencies expedited the process by using probable cause templates that the officers filled in as necessary. In other cases, the courts were simply against seat belt tickets (day or night) and would dismiss many of the tickets if the driver protested.

Operational issues. Officers said that using a stationary spotter was effective in high traffic areas but not in locations where there were simply so few unbelted drivers that officers could not reach their target of three contacts per hour. Although Washington’s mini grants initially required the officers to be stationary, many agencies started roving patrols to apprehend more seat belt law violators and to use their personnel better. Most of the officers preferred the roving patrol approach later in the night when traffic volumes dropped. At the late hours, they said that remaining stationary was unproductive and boring. Many officers noted that cold weather makes the stationary approach less appealing.

The stationary approach appeared to work best with a plain-clothes spotter calling out violations to officers in chase cars who would make the stop. Officers said they noted that drivers would buckle up if they saw a uniformed officer at the stationary position. Some agencies had limited success with their stationary spotters because of the lack of sufficient overhead lighting. Some agencies resorted to using the patrol vehicles’ headlights to create backlighting that would allow the officers to see into the vehicles. They also preferred to have start and end times earlier than 7 to 12 PM to take advantage of more daylight and higher traffic volumes.

Agencies raised a variety of other operational issues. Some police agencies did not have enough personnel to catch every offender. There was little coordination among the various agencies. The State Patrol had communication issues that inhibited their working with local

agencies. Some agencies focused only on seat belt violations, while others participated in other calls if their special seat belt patrols were not busy. With roving patrols, there was wide use of motorcycle units and unmarked cars. A number of officers reported that higher sport utility vehicles improved their ability to see into vehicles to determine seat belt use. Some of the agencies wanted more flexibility with respect to the calendar dates of the increased seat belt enforcement. This was because they already had so many other overtime projects going that the officers were not as willing to work the seat belt patrols.

Overall, law enforcement officers received WTSC's focus on nighttime seat belt usage well even though it was new to many agencies. Officers unanimously agreed that the publicity campaign was critical and enhanced their enforcement efforts. The operational issues were relatively minor with most of them focusing on problems with the mandatory use of a stationary spotter or insufficient ambient lighting to see inside the vehicle at night. Most officers felt that a stationary spotter technique was effective only when there was high traffic volume. Many agencies began using roving patrols to meet their contact targets for the campaigns. In response to these comments, WTSC relaxed the stationary patrol requirement and permitted grantees discretion in the way they operated their enforcement.

Law enforcement personnel thought that with some minor adjustments and a little more flexibility, the program would continue to be effective in Washington even though seat belt use is already high. Even without additional overtime, most of the agencies planned to continue seat belt enforcement at night, especially because it was an effective way to make additional contacts with drivers and to get "bad" drivers off the road. They said they would highly recommend the nighttime seat belt program to other law enforcement agencies across the United States

4.6 Overall Fatality Rates

Washington's 1994-2008 fatal crash rates were compared to determine whether any reductions in Washington occupant fatalities were associated with enacting primary enforcement or the NTSBE campaigns. The analyses considered the effect of Washington's primary seat belt enforcement law in 2002, the nighttime enforcement program that began in May 2007, and compared Washington to two nearby primary law States and all other primary law States during these periods. The analyses compared Washington's fatality rates to Oregon, California, and all primary jurisdictions combined by 100 million vehicle miles of travel (VMT) and by 100,000 licensed drivers. These analyses help address the question of whether the trends in Washington were similar to other States or due to particular interventions, like Washington's primary law or the nighttime program.

The analysis of occupant fatality rates included all occupants in all positions. Figure 20 shows the occupant fatality rates for each jurisdiction by 100 million VMT. The solid lines in the figure are the 12-month moving average for each series to show the patterns more easily. ARIMA analyses and tables are in Appendix E for each of these figures.

When Washington's fatalities for passenger vehicle occupants per 100 million VMT were analyzed without a comparison series (Washington data alone), there was a statistically

significant 11.6% reduction in overall occupant fatalities after primary enforcement and a 16.0% reduction during NTSBE ($p < 0.05$).

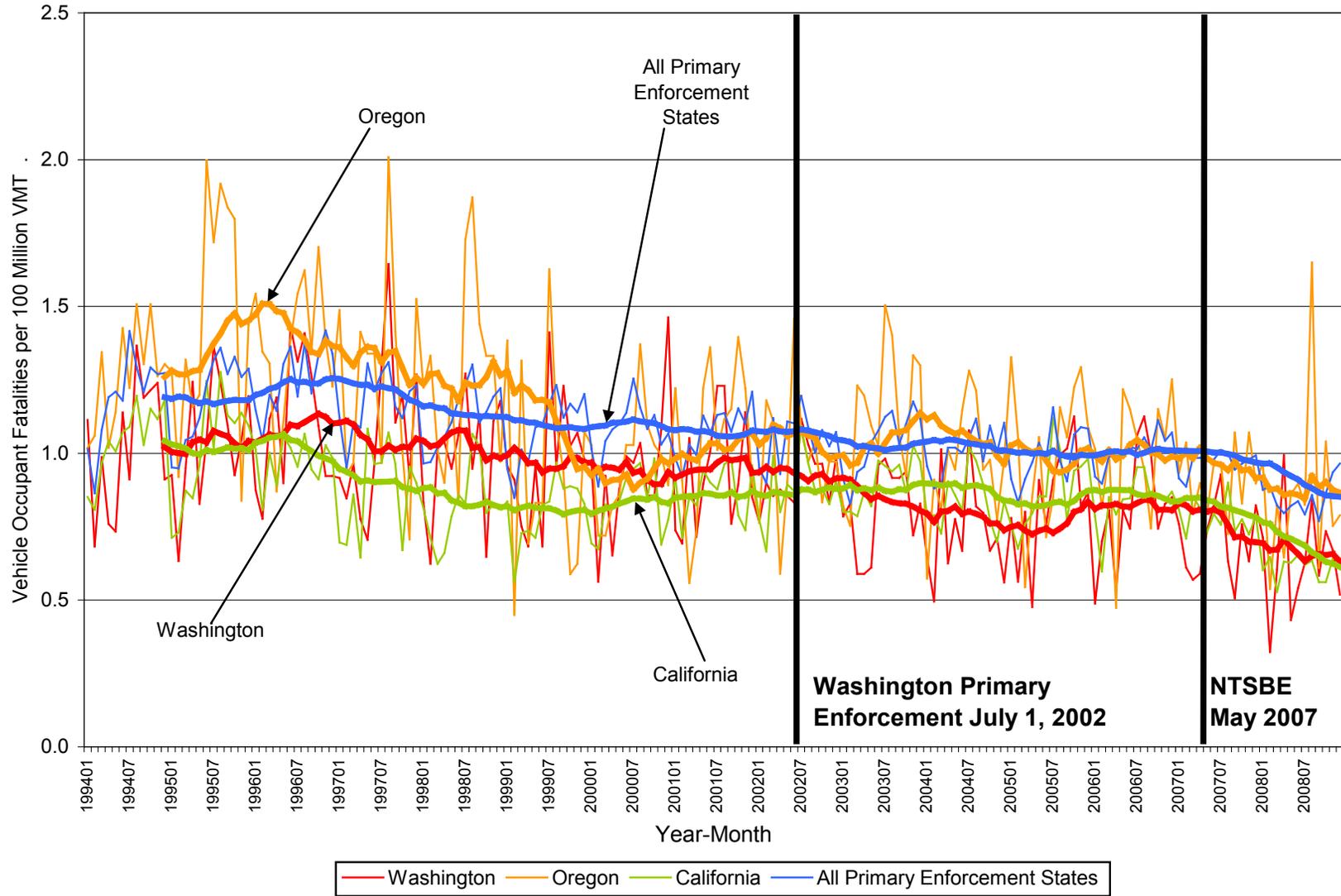
Using Oregon occupant fatalities as a comparison series, the ARIMA analysis indicated that Washington's occupant fatality rates per 100 million VMT were 20.6% lower after primary enforcement and 17.3% lower during NTSBE ($p < 0.05$). Oregon's occupant fatalities were not a predictor for those in Washington ($p > 0.05$), because during the period before Washington's primary law, Oregon's series shows dramatic changes.

Using California occupant fatalities as a comparison series, the ARIMA indicated that Washington's occupant fatality rates per 100 million VMT were 15.7% lower after primary enforcement ($p < 0.05$) but not significantly lower during NTSBE ($p > 0.05$). California's occupant fatalities were a predictor of those for Washington ($p < 0.05$), but the behavior of the two series does not coincide during the period prior to Washington's primary enforcement.

Using the overall combined occupant fatality rate for all primary enforcement States as a control series for Washington, the ARIMA indicated that Washington occupant fatalities per 100 million VMT were 10.1% lower ($p < 0.05$) after primary enforcement but not statistically lower during NTSBE ($p > 0.05$). The graph shows similar behavior between the Washington and combined primary State series during the pre-primary enforcement period. The primary State series was a good predictor of Washington occupant fatalities ($p < 0.05$).

In summary, Washington overall occupant fatalities per 100 million VMT were significantly lower after primary enforcement but did not reach statistical significance during NTSBE when compared to California and all other primary law States. While Washington's fatality rate decreased during the NTSBE period so did that of other primary law States.

Figure 20. Passenger vehicle occupant fatalities per 100 million vehicle miles traveled for Washington, Oregon, California, and all primary enforcement jurisdictions (combined) with 12-month moving averages, 1994–2008



The second ARIMA analysis used the number of licensed drivers instead of vehicle miles traveled to establish the rate for all occupants in all seating positions for Washington, Oregon, California, and all primary enforcement States combined. Figure 21 shows the occupant fatality rates for each jurisdiction by licensed drivers.

When Washington's fatalities for passenger vehicle occupants per 100,000 licensed drivers were analyzed without a comparison series (Washington data alone), there was a statistically significant 14.3% reduction in overall occupant fatalities after primary enforcement and a 20.3% reduction during NTSBE ($p < 0.05$).

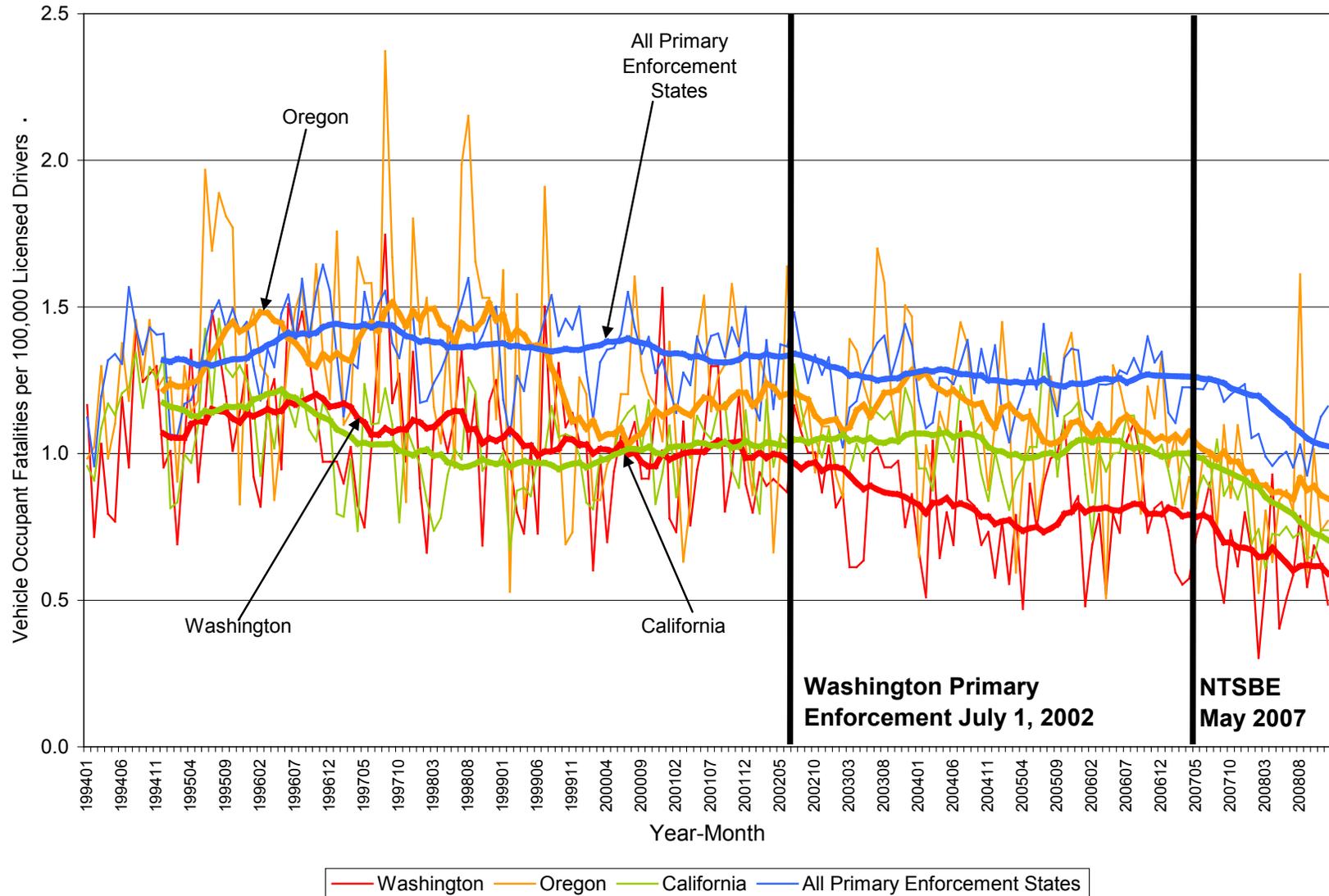
When Washington's overall occupant fatality rates per 100,000 licensed drivers were compared to the Oregon series, there were significant reductions in Washington after primary enforcement (down 20.7%) and during NTSBE (down 20.6%) ($p < 0.05$). Oregon fatality rates were not a predictor of Washington fatality rates ($p > 0.05$). During Washington's pre-primary enforcement period, Oregon's occupant fatality rates per licensed driver dropped and then increased after Washington's primary enforcement.

Using California's overall occupant fatality rates per 100,000 licensed drivers, Washington's overall occupant fatality rates were 21.8% lower after primary enforcement ($p < 0.05$) but not statistically different during NTSBE ($p > 0.05$). California occupant fatality rates were a predictor of Washington rates ($p < 0.05$) per licensed drivers, although the California series appears to differ in the pre-primary period.

Using the occupant fatality rates per 100,000 licensed drivers of all other primary enforcement States combined, there was a 17.7% reduction in Washington's occupant fatality rates after primary enforcement and an 11.4% reduction during NTSBE ($p < 0.05$). The occupant fatality rate of the combined primary enforcement jurisdictions was a predictor of Washington occupant fatality rates ($p < 0.05$), and the Washington rate appeared to be trending downward in the pre-primary enforcement period more than in the combined primary enforcement States.

In summary, Washington's overall occupant fatalities per 100,000 licensed drivers were significantly lower after primary enforcement when compared to Oregon, California, and all other primary law States. During NTSBE, Washington's overall occupant fatalities per 100,000 licensed drivers were significantly lower when compared to the fatality rates of Oregon and all other primary law States, but did not reach statistical significance when compared to California.

Figure 21. Monthly overall passenger vehicle occupant fatalities per 100,000 licensed drivers for Washington, Oregon, California, and all primary enforcement jurisdictions (combined) with 12-month moving averages, 1994–2008



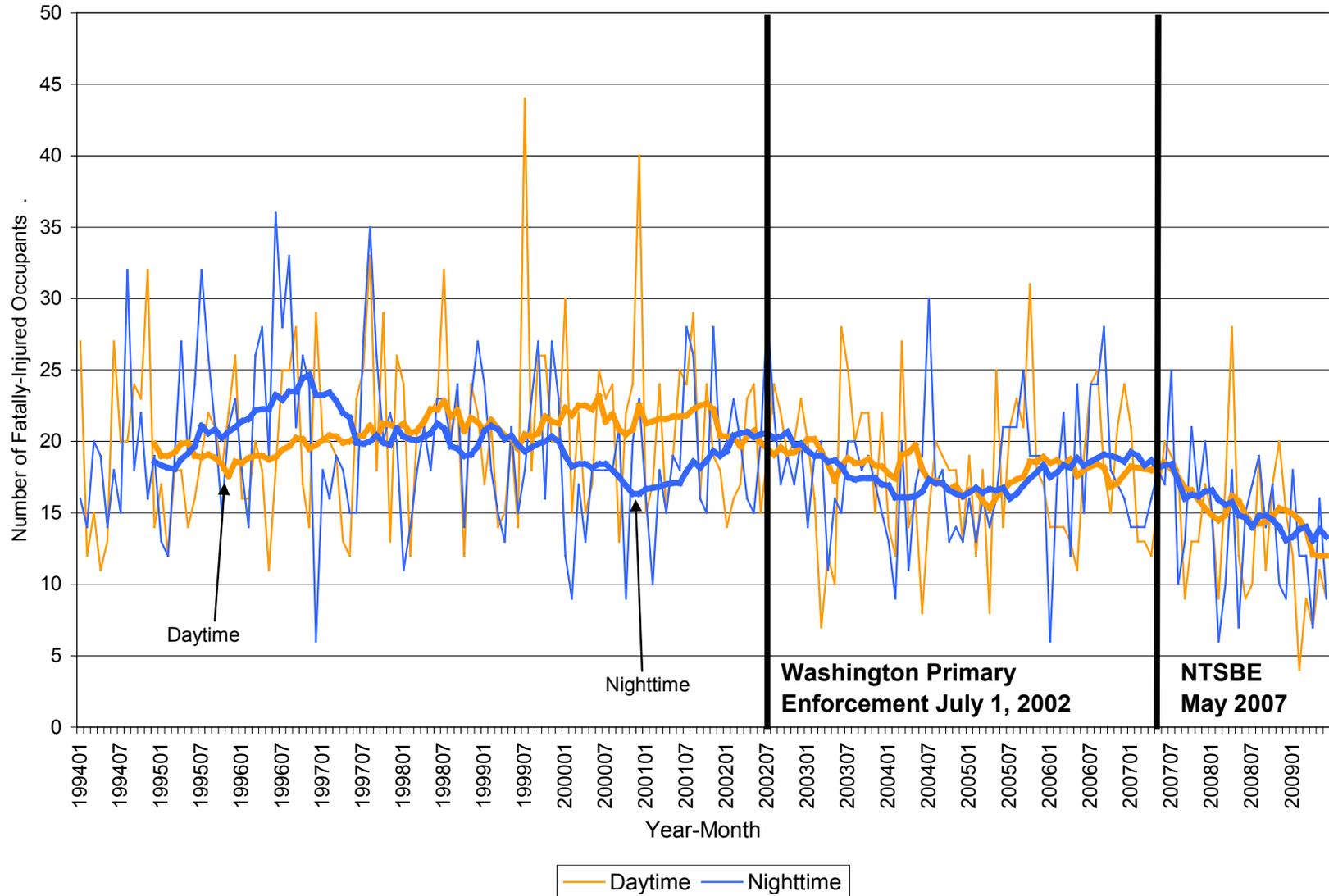
Overall, both VMT and licensed drivers analyses strongly suggest that there were large reductions in occupant fatalities in Washington after enacting primary enforcement. The results for NTSBE are not as clear because the effect depends on the choice of the control jurisdiction, VMT, or licensed drivers to create the rates. The month-to-month variation in California and Oregon occupant fatality rates (both vehicle miles of travel and licensed drivers) differs from Washington's during the pre-intervention period, and this variability critically influences the sensitivity of the ARIMA. The comparison series composed of all primary enforcement jurisdictions combined was similar to the Washington series during the pre-primary enforcement period, particularly when vehicle miles of travel was used to calculate fatality rates. The combined series is less variable from month-to-month because it uses a larger number of occupants, which provides more statistical power for the comparisons.

4.7 Nighttime Fatality Rates in Washington

The approach for the nighttime (6 p.m. to 5:59 a.m.) analyses was to analyze the monthly occupant fatalities during the daytime and nighttime hours separately. Next, the nighttime fatalities were analyzed using daytime fatalities as a within-State control. The hypothesis was that a successful nighttime belt program should have a greater reduction in nighttime fatalities than the daytime fatalities. It was not necessary to create crash rates because all comparisons are within the same State. Figure 22 presents the January 1994 through June 2009 total occupant fatalities during the daytime and nighttime hours for Washington.

Daytime and nighttime fatalities decreased in Washington during the nighttime enforcement campaign as well as after the primary law went into effect. There were 2.5 fewer *nighttime* occupant fatalities per month after primary enforcement and 3.4 fewer nighttime occupant fatalities during NTSBE activities ($p < 0.05$). There were 2.1 fewer *daytime* occupant fatalities per month after primary enforcement and 4.1 fewer daytime occupant fatalities during NTSBE activities ($p < 0.05$). Using daytime fatalities as a control series for nighttime, the ARIMA indicated that primary enforcement and NTSBE were directionally associated with fewer nighttime occupant fatalities per month but did not reach conventional levels of statistical significance ($p = .079$ and $p = 0.053$). Overall, these results suggest that both primary enforcement and NTSBE were associated with overall reductions in daytime and nighttime occupant fatalities in Washington.

Figure 22. Monthly daytime and nighttime total occupant fatalities in Washington with 12-month moving averages, January 1994–June 2009



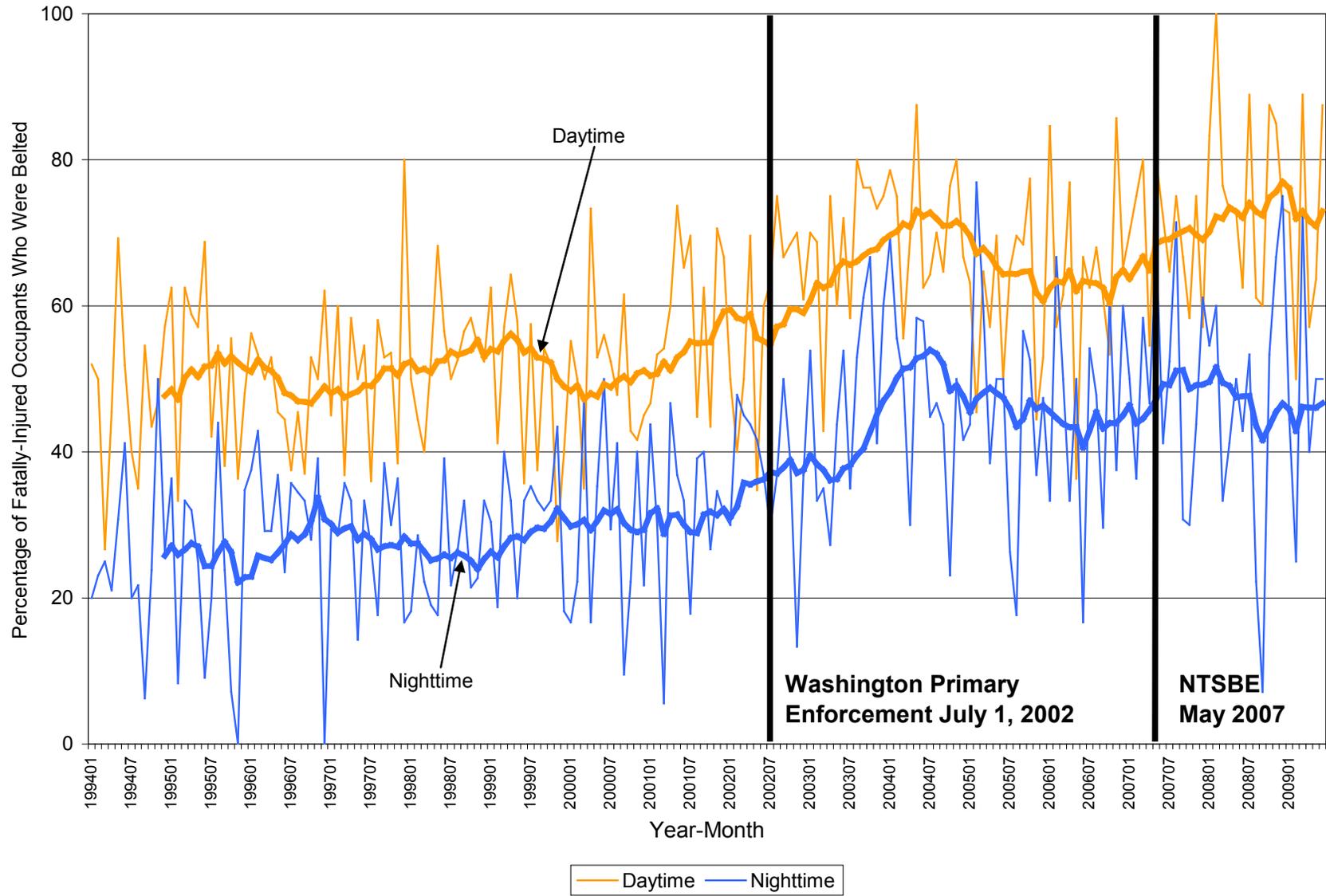
4.8 Day and Night Belt Use Based on FARS Data

Figure 23 presents the January 1994 through June 2009 daytime and nighttime seat belt use of fatally injured occupants in FARS for Washington relative to the inception of the State's primary seat belt law and the implementation of NTSBE. Belt use recorded in FARS is always lower than observed seat belt use, partly because occupants with the highest risk of being involved in a serious crash are also the least likely to wear their seat belts. These include young males, impaired drivers, and those with histories of past violations or crashes (Nichols and Ledingham, 2008). Belt use among fatally injured occupants both day and night has steadily increased since Washington's primary law. Washington daytime belt use among fatalities is consistently higher than nighttime belt use among fatalities in FARS.

When nighttime belt use among fatally injured occupants was analyzed alone (without a control series), there was a statistically significant 16.4 percentage-point increase in belt use, ($p < 0.05$) after primary enforcement, and a positive, but not statistically significant change with NTSBE ($p > 0.05$). Daytime belt use among fatalities was statistically significantly 15.2 percentage points higher after primary enforcement and 6.1 percentage-points higher after NTSBE ($p < 0.05$). Using daytime belt use as a control series for nighttime belt use, belt use among fatally injured occupants was 15.5 percentage-points higher ($p < 0.05$) with primary enforcement but did not reach statistical significance during NTSBE ($p > 0.05$). These results suggest that passage of primary enforcement was reliably associated with increased daytime and nighttime belt use among fatally injured occupants, the desired outcome. NTSBE, however, did not produce a consistent outcome.

Another analysis included all occupants of passenger vehicles that were involved in a crash in which at least one person died. This analysis is different from the prior analyses in that it includes data on the seat belt use of both those people who died and those who survived the crash. When analyzed without a control series, there was a significant 15.5 percentage-point increase in nighttime seat belt use among fatal-crash-involved occupants ($p < 0.05$) after primary enforcement, but the belt use increase after NTSBE did not reach statistical significance. Daytime belt use among fatal-crash-involved occupants increased 13.7 percentage points after primary enforcement and increased 7.2 percentage points during NTSBE, both statistically significant ($p < 0.05$). When daytime belt use served as a control for nighttime belt use, nighttime belt use increased 12.6 percentage points ($p < 0.05$) after primary enforcement, but the increase after NTSBE did not reach significance. Daytime belt use was a predictor of nighttime belt use among all occupants ($p < 0.05$). Similar to the results for fatally injured occupants, NTSBE did not produce a statistically significant increase in belt use among occupants in fatal crashes. Complete ARIMA results are in Appendix E.

Figure 23. Monthly daytime and nighttime fatally injured occupant belt use for Washington, January 1994–June 2009.



4.9 Limitations

Each of the data collection methods had its own limitations that could have biased the outcomes of this study. However, the results were sufficiently strong and consistent across the different data collection activities that it is reasonable to conclude that no significant threats to the validity of the conclusions. While there were some positive findings from the study, the high seat belt use rate in Washington and the lack of a large difference in daytime and nighttime observed seat belt use may limit the applicability of the findings.

WTSC conducted a self-report awareness survey at five driver licensing offices throughout two years across the State. This approach yielded a large sample size. It is possible, although unlikely, that with only five offices the sample of respondents was not truly representative of the entire driving population of Washington. Analyses of basic demographic data suggested that the survey sample matched the population of the State quite well and yielded an oversample of the target high-risk 18- to 34-year-old drivers. Four of the five licensing offices were in larger cities, where media were likely more prevalent, possibly inflating the extent of the exposure measures.

Day and night seat belt use was observed at 40 sites across the State. These sites were chosen from the State's larger representative sample of sites used during annual statewide observation surveys. The 40 sites were chosen based on convenience, observer team availability, and previous use by WTSC, but not by vehicle miles traveled or other metric. The nighttime observations initially were taken at the same locations as the daytime observations, but due to virtually no traffic flow at some sites at night, some nighttime locations were moved to allow for a more robust sample. Although the new locations were very close to the old locations, they were specifically chosen to increase the number of observations that could affect observed belt use rates.

Many, but not all, of the law enforcement agencies participating in the NTSBE campaigns provided citations for analysis. Thus, the citation data represented only a subset of the State's enforcement effort and had an unknown sampling bias. No citations were available for the period before the project started which made it impossible to know if the population of drivers receiving tickets during the NTSBE campaigns was different from those who normally received tickets at night before the campaign. Officer handwriting on some of the citations was difficult to read, which could potentially have caused data entry errors.

It is possible that Washington is atypical with respect to its response to a program such as NTSBE. While Washington's seat belt use rate had exceeded 90% since at least 2002 (NHTSA, 2010), that level of seat belt use is no longer unusual. At least 15 other States and Puerto Rico also had seat belt use rates in excess of 90% in 2009, and by 2013, this increased to 20 States, Guam, and the N. Mariana Islands (Chen, 2014). CIOT activities have occurred in every State raising awareness and belt use levels. The nighttime tactics used in Washington did not differ notably from other, similar, high-visibility enforcement efforts reported in the literature.

5. DISCUSSION

The Nighttime Seat Belt Enforcement program was a 2-year high-visibility nighttime seat belt enforcement project to address Washington's high nighttime unbelted fatality rates. The State developed messaging that explained the purpose of emphasizing nighttime enforcement and placed ads on TV, radio, online, and on variable message boards across the State. The target audience was high-risk 18- to 34-year-old male drivers. Each of the enforcement waves occurred during the nighttime rather than the daytime hours over the course of two years.

Washington's Department of Licensing surveys showed that people reported seeing and hearing the NTSBE messages about nighttime enforcement and noticed increased enforcement at night. The message reached 18- to 34-year-old male drivers. WTSC's approach to raising the visibility of seat belt enforcement at night worked well. Interestingly, in spite of the successful increase in awareness of NTSBE and its enforcement, when Washington drivers noticed someone stopped by police at the side of the road, most thought that the police were stopping the driver for some other reason than seat belt enforcement. There was no meaningful change in self-reported day or night seat belt use; most drivers reported that they always wore their seat belts day or night, which was consistent with observed belt use.

The 40-site nighttime seat belt observation survey provided strong evidence that nighttime seat belt use increased during the NTSBE program. Of equal interest, Washington's high daytime belt use rates did not go down despite diverting the bulk of the CIOT resources to nighttime enforcement. In addition to WTSC's media messages, during the Memorial Day CIOT mobilizations, Washington was part of NHTSA's national CIOT media buy that stressed both day and night seat belt enforcement. These messages, combined with Washington's legacy of vigorous seat belt enforcement, likely continued to maintain general deterrence.

A somewhat unexpected finding from the 40-site observations was that nighttime seat belt use was at virtually the same level as daytime use even before NTSBE began. The results of previous studies (e.g., Chaudhary & Presusser, 2006) suggested that nighttime seat belt use would be notably lower than the daytime level, although those study States were at much lower belt rates than Washington. Further research might investigate whether Washington's higher nighttime belt use resulted from the specific high-visibility enforcement strategies and tactics used by the State or was within the normal variability of day versus night use across States.

The analysis of fatality data showed the success of Washington State's overall seat belt program. The switch to a primary law prior to NTSBE resulted in a significant decrease in fatalities that the NTSBE program strengthened. However, fatality rates during this time were also declining across the country, thus additional analysis compares Washington's changes to other primary law States who were not conducting nighttime enforcement campaigns. These comparisons do not demonstrate a consistent effect of the NTSBE program on outcomes.

Washington's nighttime enforcement strategies could be adapted to other States. Nighttime enforcement is probably not suited for rural areas or areas with low nighttime traffic volume. Nighttime enforcement takes longer per stop and yields more DUI arrests than daytime programs. Future research might focus on applying nighttime enforcement strategies in a primary law State with markedly lower belt use (closer to the national average), a greater difference between daytime and nighttime observed belt use, or in a State in the process of changing from a secondary to a primary law.

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APPENDIX A: EXAMPLES OF PAID AND EARNED MEDIA

Nighttime Seat Belt Patrols 30 Second PSA



Quick Traffic montage with graphic:

Extra Nighttime Seat Belt Patrols are Going on Now



I'm Les Young, Assistant Chief with the Washington State Patrol. Along with other law enforcement agencies throughout Washington State, we'll be conducting special nighttime seat belt patrols.



We're doing this because our nighttime traffic death rate is over four times what it is during the day, and seat belt use at night is lower.



The goal of the project is to reduce traffic deaths and injuries.



Voiceover:

Nighttime seat belt patrols are now under way. So remember, Click it or Ticket.

A message from the Washington Traffic Safety Commission.

Nighttime seat belt crackdown nets 354

Fatality rate increases
by four times after dark

By JOHN BRANTON
Columbian staff writer

You'd better buckle up tight, including at night.

During a police crackdown to convince more folks to wear their seat belts after dark, 354 motorists saw flashing lights in their rearview mirrors.

Beginning on Oct. 22 and continuing for about two weeks, troopers with the Washington State Patrol and officers with the Vancouver Police Department went after the 3.6 percent of people who don't buckle up.

Although Washington's seat-belt use rate of 96.4 percent is one of the best in the U.S., local officers want to make it even better.

The nighttime stings, typically using overtime payroll money from the Washington Traffic Safety Commission, are meant to lower the rate of fatalities in traffic accidents after dark.

The number of traffic deaths during the day and night are about the same, said Trooper Mike Kesler. But there's so much less traffic volume at night that the nighttime fatality rate is four times the daytime rate.

On a recent night, Vancouver Sgt. Wayne Reynolds stood in plain view at major traffic areas, including Southeast Mill Plain Boulevard and 136th Avenue in Cascade Park. He wore a police uniform and gun belt, and carried a radio.

As most cars went past, Reynolds saw no seat-belt violations. He later estimated that fewer than 5 percent of vehicles had any visible violations.

But when Reynolds did see a vio-

Seat belts:

From Page C1

lation of state law, he'd radio the car's description and license plate to other officers waiting nearby in patrol cars or on police motorcycles.

How well did local motorists do? Here are the results of the 354 traffic stops:

■ Vancouver police traffic unit officers issued 91 seat-belt tickets, including 61 to drivers and the rest to passengers. Seven VPD tickets were given for misuse of seat belts, such as pulling the shoulder strap under one's arm. Officers also gave out 11 tickets for violating child safety-restraint laws.

■ Troopers handed out 46 seat-belt tickets in Clark County and two for child-safety restraint violations. In addition, troopers made one DUI arrest and five drug arrests, and arrested three people for previously issued warrants. Eleven of the motorists had suspended driver's licenses.

Troopers also stopped 11 vehicles in Skamania and Klickitat counties and issued two seat-belt tickets.

WSP employees "are fully committed to improving traffic safety on our roadways, and these results ... demonstrate that commitment," Lt. Ron Rupke said in a bulletin.

Vancouver's officers also consider the crackdown a success, and plan to continue it periodically, using the department's regular funding, said Kim Kapp, Vancouver police spokeswoman.

In addition, another state-funded nighttime crackdown is scheduled for May.

JOHN BRANTON covers crime and law enforcement for *The Columbian*. He can be reached at 360-759-8012 or john.branton@columbian.com.

SEAT BELTS, back page

Dear reader

Got a traffic-related question or comment?

E-mail

bumper@seattletimes.com
or call Charles E. Brown at
206-464-2206. Please
include your name and city
if you agree to publication.

what it is during the day because seat-belt use is lower, perhaps partly because many folks think police can't see unbuckled motorists at night.

Officers observing traffic will be aided by patrol officers who will pursue vehicles and make stops. Agencies plan to run the emphasis through June 3. Participating agencies in King County include Seattle, Bellevue, Black Diamond, SeaTac, Issaquah, Kent, Burien, Kirkland, Shoreline, Maple Valley and Federal Way police departments, and the State Patrol.

Seat-belt usage across the state has increased from 35 percent when it became law in 1986 to the current estimated 94 percent, the highest seat-belt use recorded in the nation, the commission says. The nation's seat-belt-use average is 81 percent.

The state's primary seat-belt law gives officers authority to pull over unbuckled motorists. The state's been conducting "Click it or Ticket" campaigns for the past five years.

BUMPER NOTE

For the first time since its inception, this state's "Click it or Ticket" campaign will take to nighttime hours. Starting next Monday, more than 75 law-enforcement agencies throughout the state will be patrolling for unbuckled motorists.

The Washington Traffic Safety Commission says the nighttime death rate is four times

APPENDIX B: PARTICIPATING LAW ENFORCEMENT AGENCIES

Participating Law Enforcement Agencies - May 2007 Mobilization

Aberdeen PD	Lynden PD
Adams County SO	Lynnwood PD
Battleground PD	Longview PD
Bellevue PD	Maple Valley PD
Bellingham PD	Shelton PD*
Black Diamond	Mason County SO*
Burien PD	Moses Lake
Brewster PD	Okanogan SO
Camas PD	Pasco PD
Castle Rock PD	Pierce County SO
Chehalis PD	Puyallup PD
Chelan SO	Raymond PD
Clark SO	Richland PD
Cowlitz SO	Sea Tac PD
Douglas SO	Seattle PD
E. Wenatchee PD	Selah PD
Edmonds PD	Shoreline PD
Ephrata PD	Sno Com 911
Federal Way PD	South Bend PD
Franklin SO	Spokane PD
Grant Coty SO	Tacoma PD
Grays Harbor SO	University Place PD
Hoquiam PD	Vader PD
Island County SO	Walla Walla PD
Kennewick PD	Wenatchee PD
Kelso PD	Western WA U PD
Kent PD	Whatcom Coty SO
Kirkland PD	Whitman Coty SO
Kitsap SO	Woodland PD
Lacey PD	Yakima SO
Lakewood PD	Yakima PD
Lewis Coty SO	Washington State Patrol

PD = Police Department

SO = Sheriff's Office

***Part of Mason County TF**

Participating Law Enforcement Agencies - October 2007 Mobilization

Auburn PD
Battle Ground PD
Bellevue PD
Bellingham PD
Black Diamond PD
Burien PD
Chelan SO
Cheney PD
Clarkston PD
Douglas SO
E. Wenatchee PD
Ephrata PD
Edmonds PD
Federal Way PD
Ferry SO
Forks PD
City of Goldendale PD
Grant SO
Grays Harbor SO
Hoquiam PD
Island SO
Issaquah PD
Kennewick PD
Kent PD
Kitsap SO
Lacey PD
Longview PD
Lynden PD
Lynnwood PD
Maple Valley PD
Morton PD
Pend Oreille SO
Puyallup PD
Sea Tac PD
Selah PD
Shelton PD
Shoreline PD
South Bend PD
Spokane SO
Spokane PD
Spokane Valley PD
Sunnyside PD
Tacoma PD
Vancouver PD
Wenatchee PD
Whatcom SO
Whitman SO

Woodenville PD
Walla Walla PD
Yakima SO
Washington State Patrol

PD = Police Department
SO = Sheriff's Office

Participating Law Enforcement Agencies - May 2008 Mobilization

Aberdeen PD	Woodenville PD
Bellevue PD	WSU PD
Bellingham PD	Yakima SO
Black Diamond PD	Yelm PD
Burien PD	Washington State Patrol
Chelan SO	
Cheney PD	
Clark SO	
Clarkston PD	
E. Wenatchee PD	
Eastern Washington University	
Edmonds PD	
Franklin SO	
Grant SO	
Grays Harbor SO	
Hoquiam PD	
Island SO	
Issaquah PD	
Jefferson SO	
Kennewick PD	
Kent PD	
Kitsap SO	
Lacey PD	
Lakewood PD	
Long Beach PD	
Longview PD	
Lynnwood PD	
Oak Harbor PD	
Pacific SO	
Puyallup PD	
Sea Tac PD	
Sequim PD	
Shelton PD	
Shoreline PD	
South Bend PD	
Spokane SO	
Spokane PD	
Spokane Valley PD	
Sunnyside PD	
Tacoma PD	
Vancouver PD	
Whatcom SO	
Wenatchee PD	
Whitman SO	

PD = Police Department
SO = Sheriff's Office

Participating Law Enforcement Agencies - October 2008 Mobilization

Bellingham PD	Montesano PD
Island County SO	Raymond PD
Sequim PD	Sequim PD
Whatcom County SO	Vancouver PD
Anacortes PD	Longview PD
Ferndale PD	Woodland PD
Lynden PD	Kelso PD
Western Washington University PD	Castlerock PD
Bellevue PD	Battleground PD
Puyallup PD	Cowlitz County SO
Sea Tac (King County SO)	Toledo PD
Black Diamond PD	Vader PD
Lynnwood PD	Spokane County SO
Edmonds PD	Spokane Valley PD
Burien PD	Yakima County SO
Shoreline PD	Kickitat County SO
Issaquah PD	Selah PD
Sumner PD	Union Gap PD
Kent PD	Kennewick PD
Maple Valley PD	Franklin County SO
Des Moines PD	Whitman County SO
Everett PD	Washington State University PD
Federal Way PD	Walla Walla PD
Kenmore PD	Chelan County SO
Lake Stevens PD	Wenatchee PD
Redmond PD	Grant County SO
Shoreline PD	Connell PD
Lakewood PD	Grand Coulee PD
Tacoma PD	Ferry County SO
Pierce County SO	Republic PD
Lacey PD	Washington State Patrol (all 8 Districts and the Commercial Vehicle Division)
Tenino PD	
Shelton PD	
Centralia PD	
Aberdeen PD	PD = Police Department
Hoquiam PD	SO = Sheriff's Office
South Bend PD	

Participating Law Enforcement Agencies - May 2009 Mobilization

Aberdeen PD	Montesano PD
Anacortes PD	Morton PD
Arlington PD	Mountlake Terrace PD
Asotin PD	Oakesdale PD
Auburn PD	Ocean Shores PD
Battleground PD	Omak PD
Black Diamond PD	Port Townsend PD
Bonney Lake PD	Puyallup PD
Brewster PD	Redmond PD
Burien PD	Renton PD
Chelan County SO	SeaTac PD
Clark County SO	Selah PD
Cosmopolis PD	Sequim PD
East Wenatchee PD	Shelton PD
Edmonds PD	Shoreline PD
Elma PD	Snohomish County SO
Ephrata PD	South Bend PD
Ferndale PD	Spokane PD
Fircrest PD	Spokane Valley PD
Grant County SO	Sumner PD
Grays Harbor SO	Sunnyside PD
Hoquiam PD	Tacoma PD
Island COSO	Union Gap PD
Issaquah PD	Vancouver PD
Jefferson County SO	Vancouver PD
Kennewick PD	Walla Walla PD
Kent PD	Wenatchee PD
Kirkland PD	Western Washington University PD
Lacey PD	Whitman COSO
Lake Stevens PD	Washington State University PD
Lakewood PD	Yakima SO
Lynden PD	Washington State Patrol (all 8 Districts and the Commercial Vehicle Division)
Lynnwood PD	
Maple Valley PD	
Marysville PD	PD = Police Department
Mason County SO	SO = Sheriff's Office
Milton PD	

APPENDIX C: DOL AWARENESS SURVEY QUESTIONNAIRE

The East Spokane Department of Licensing office is assisting the Washington Traffic Safety Commission in a study about highway safety in Washington. Your answers to the following questions are voluntary and anonymous. Please complete the survey and then put it in the drop box or hand it back to the agent.

Your sex: Male Female

2. Your Zip Code: _____

Your age: Under 18 18-20 21-25 26-34 35-49 50-59 60 Plus

When you pass a driver stopped by the police in the daytime, what do you think the stop was for? (Check 1 only)

Speeding Seat Belt Violation Drunk Driving Reckless Driving Registration Violation Other _____

When you pass a driver stopped by the police at night, what do you think the stop was for? (Check 1 only)

Speeding Seat Belt Violation Drunk Driving Reckless Driving Registration Violation Other _____

What type of vehicle do you drive most often? (Check 1 only)

Passenger car Pick-up truck Semi truck SUV Mini-van Full-van Other

About how many miles did you drive last year... (Please give your best estimate)

During the day? _____ miles At night? _____ miles

Compared to daytime, how often do you wear your seat belt at night? More Less The same

If more or less, Why? _____

Have you increased your seat belt use recently? Yes No If yes, Why? _____

How often do you use seat belts when you drive or ride in a car, van, SUV or pick-up...

During the day? Always Nearly always Sometimes Seldom Never

At night? Always Nearly always Sometimes Seldom Never

How strictly do you think the police enforce the Washington seat belt law...

During the day? Very strictly Somewhat strictly Not very strictly Rarely Not at all

At night? Very strictly Somewhat strictly Not very strictly Rarely Not at all

Have you ever been stopped by the police for not wearing a seat belt... (Check all that apply)

During the day? Yes, I got a ticket Yes, I got a warning No

At night? Yes, I got a ticket Yes, I got a warning No

Have you recently noticed increased enforcement of the seat belt law at night?

Yes, I got a ticket Yes, I got a warning Yes, I noticed but wasn't stopped No

Have you recently read, seen or heard anything about nighttime seat belt enforcement? Yes No

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

Newspaper Radio TV Road sign Brochure Police Billboard Poster Internet Other

If yes, what did it say? _____

How often do you think you would get a ticket in Washington if you did not wear your seat belt while driving...

During the day? Always Nearly always Sometimes Seldom Never

At night? Always Nearly always Sometimes Seldom Never

If you were to drink too much to drive safely, what percentage of the time would you be stopped by the police for drunk driving...

During the day? 100% 75% 50% 25% 10% Less than 10% 0%

At night? 100% 75% 50% 25% 10% Less than 10% 0%

APPENDIX D: DOL AWARENESS SURVEY RESULTS

Table D-1. Recently Read, Heard Or Saw Anything About Nighttime Seat Belt Enforcement

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Yes	Count	35	176	87	116	48	70	94	87	145	148	72	131	1209
		Col%	12.0%	60.3%	38.5%	78.4%	54.5%	47.0%	46.3%	55.1%	34.7%	54.2%	42.9%	60.6%	46.0%
	No	Count	257	116	139	32	40	79	109	71	273	125	96	85	1422
		Col%	88.0%	39.7%	61.5%	21.6%	45.5%	53.0%	53.7%	44.9%	65.3%	45.8%	57.1%	39.4%	54.0%
	Total	Count	292	292	226	148	88	149	203	158	418	273	168	216	2631
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Yes	Count	165	957	519	639	286	327	457	474	585	661	348	581	5999
		Col%	10.4%	62.6%	38.1%	70.4%	49.3%	39.2%	39.7%	50.1%	33.4%	53.3%	40.6%	59.8%	43.7%
	No	Count	1419	571	843	269	294	508	695	472	1166	579	509	391	7716
		Col%	89.6%	37.4%	61.9%	29.6%	50.7%	60.8%	60.3%	49.9%	66.6%	46.7%	59.4%	40.2%	56.3%
	Total	Count	1584	1528	1362	908	580	835	1152	946	1751	1240	857	972	13715
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-2. Saw Or Heard Nighttime Seat Belt Message on TV

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	23	80	38	65	34	46	62	52	93	115	40	88	736
		Col%	7.5%	26.8%	16.7%	43.3%	36.2%	29.7%	29.7%	31.9%	21.9%	37.8%	22.2%	38.8%	26.9%
	Not Checked	Count	284	218	189	85	60	109	147	111	332	189	140	139	2003
		Col%	92.5%	73.2%	83.3%	56.7%	63.8%	70.3%	70.3%	68.1%	78.1%	62.2%	77.8%	61.2%	73.1%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	91	524	318	393	176	214	276	319	343	489	217	408	3768
		Col%	5.5%	33.7%	23.0%	42.1%	29.2%	24.7%	23.1%	32.9%	19.2%	36.2%	24.2%	40.8%	26.5%
	Not Checked	Count	1563	1032	1066	541	426	654	921	650	1439	861	680	593	10426
		Col%	94.5%	66.3%	77.0%	57.9%	70.8%	75.3%	76.9%	67.1%	80.8%	63.8%	75.8%	59.2%	73.5%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-3. Heard Nighttime Seat Belt Message on Radio

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	18	73	35	61	22	32	43	52	62	84	37	64	583
		Col%	5.9%	24.5%	15.4%	40.7%	23.4%	20.6%	20.6%	31.9%	14.6%	27.6%	20.6%	28.2%	21.3%
	Not Checked	Count	289	225	192	89	72	123	166	111	363	220	143	163	2156
		Col%	94.1%	75.5%	84.6%	59.3%	76.6%	79.4%	79.4%	68.1%	85.4%	72.4%	79.4%	71.8%	78.7%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	65	326	217	296	123	138	177	216	235	348	143	238	2522
		Col%	3.9%	21.0%	15.7%	31.7%	20.4%	15.9%	14.8%	22.3%	13.2%	25.8%	15.9%	23.8%	17.8%
	Not Checked	Count	1589	1230	1167	638	479	730	1020	753	1547	1002	754	763	11672
		Col%	96.1%	79.0%	84.3%	68.3%	79.6%	84.1%	85.2%	77.7%	86.8%	74.2%	84.1%	76.2%	82.2%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-4. Saw Nighttime Seat Belt Message on Road Sign

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	9	76	26	26	11	13	25	23	45	51	17	31	353
		Col%	2.9%	25.5%	11.5%	17.3%	11.7%	8.4%	12.0%	14.1%	10.6%	16.8%	9.4%	13.7%	12.9%
	Not Checked	Count	298	222	201	124	83	142	184	140	380	253	163	196	2386
		Col%	97.1%	74.5%	88.5%	82.7%	88.3%	91.6%	88.0%	85.9%	89.4%	83.2%	90.6%	86.3%	87.1%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	34	366	112	161	58	61	90	100	148	182	70	137	1519
		Col%	2.1%	23.5%	8.1%	17.2%	9.6%	7.0%	7.5%	10.3%	8.3%	13.5%	7.8%	13.7%	10.7%
	Not Checked	Count	1620	1190	1272	773	544	807	1107	869	1634	1168	827	864	12675
		Col%	97.9%	76.5%	91.9%	82.8%	90.4%	93.0%	92.5%	89.7%	91.7%	86.5%	92.2%	86.3%	89.3%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-5. Saw Nighttime Seat Belt Message In Newspaper

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	7	23	12	15	7	12	7	11	17	28	6	16	161
		Col%	2.3%	7.7%	5.3%	10.0%	7.4%	7.7%	3.3%	6.7%	4.0%	9.2%	3.3%	7.0%	5.9%
	Not Checked	Count	300	275	215	135	87	143	202	152	408	276	174	211	2578
		Col%	97.7%	92.3%	94.7%	90.0%	92.6%	92.3%	96.7%	93.3%	96.0%	90.8%	96.7%	93.0%	94.1%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	42	184	99	126	55	57	76	86	76	128	42	88	1059
		Col%	2.5%	11.8%	7.2%	13.5%	9.1%	6.6%	6.3%	8.9%	4.3%	9.5%	4.7%	8.8%	7.5%
	Not Checked	Count	1612	1372	1285	808	547	811	1121	883	1706	1222	855	913	13135
		Col%	97.5%	88.2%	92.8%	86.5%	90.9%	93.4%	93.7%	91.1%	95.7%	90.5%	95.3%	91.2%	92.5%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-6. Saw Nighttime Seat Belt Message On Billboard

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	7	20	12	13	6	8	10	12	26	25	12	17	168
		Col%	2.3%	6.7%	5.3%	8.7%	6.4%	5.2%	4.8%	7.4%	6.1%	8.2%	6.7%	7.5%	6.1%
	Not Checked	Count	300	278	215	137	88	147	199	151	399	279	168	210	2571
		Col%	97.7%	93.3%	94.7%	91.3%	93.6%	94.8%	95.2%	92.6%	93.9%	91.8%	93.3%	92.5%	93.9%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	25	113	70	83	34	35	52	52	70	89	47	77	747
		Col%	1.5%	7.3%	5.1%	8.9%	5.6%	4.0%	4.3%	5.4%	3.9%	6.6%	5.2%	7.7%	5.3%
	Not Checked	Count	1629	1443	1314	851	568	833	1145	917	1712	1261	850	924	13447
		Col%	98.5%	92.7%	94.9%	91.1%	94.4%	96.0%	95.7%	94.6%	96.1%	93.4%	94.8%	92.3%	94.7%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-7. Received Nighttime Seat Belt Message From Police

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	2	4	7	10	3	3	2	7	16	10	6	6	76
		Col%	.7%	1.3%	3.1%	6.7%	3.2%	1.9%	1.0%	4.3%	3.8%	3.3%	3.3%	3.3%	2.6%
	Not Checked	Count	305	294	220	140	91	152	207	156	409	294	174	221	2663
		Col%	99.3%	98.7%	96.9%	93.3%	96.8%	98.1%	99.0%	95.7%	96.2%	96.7%	96.7%	96.7%	97.4%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	11	29	23	20	9	10	10	20	26	24	9	18	209
		Col%	.7%	1.9%	1.7%	2.1%	1.5%	1.2%	.8%	2.1%	1.5%	1.8%	1.0%	1.8%	1.5%
	Not Checked	Count	1643	1527	1361	914	593	858	1187	949	1756	1326	888	983	13985
		Col%	99.3%	98.1%	98.3%	97.9%	98.5%	98.8%	99.2%	97.9%	98.5%	98.2%	99.0%	98.2%	98.5%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-8. Saw Nighttime Seat Belt Message In Brochure

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	1	3	0	2	1	0	0	2	5	2	1	4	21
		Col%	.3%	1.0%	.0%	1.3%	1.1%	.0%	.0%	1.2%	1.2%	.7%	.6%	1.8%	.8%
	Not Checked	Count	306	295	227	148	93	155	209	161	420	302	179	223	2718
		Col%	99.7%	99.0%	100.0%	98.7%	98.9%	100.0%	100.0%	98.8%	98.8%	99.3%	99.4%	98.2%	99.2%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	2	11	8	4	3	7	3	8	10	10	4	7	77
		Col%	.1%	.7%	.6%	.4%	.5%	.8%	.3%	.8%	.6%	.7%	.4%	.7%	.5%
	Not Checked	Count	1652	1545	1376	930	599	861	1194	961	1772	1340	893	994	14117
		Col%	99.9%	99.3%	99.4%	99.6%	99.5%	99.2%	99.7%	99.2%	99.4%	99.3%	99.6%	99.3%	99.5%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-9. Saw Or Heard Nighttime Seat Belt Message On Internet

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Read, Saw, Heard	Count	0	0	1	5	0	2	5	3	12	11	3	6	48
		Col%	.0%	.0%	.4%	3.3%	.0%	1.3%	2.4%	1.8%	2.8%	3.6%	1.7%	2.6%	1.8%
	Not Checked	Count	307	298	226	145	94	153	204	160	413	293	177	221	2691
		Col%	100.0%	100.0%	99.6%	96.7%	100.0%	98.7%	97.6%	98.2%	97.2%	96.4%	98.3%	97.4%	98.2%
	Total	Count	307	298	227	150	94	155	209	163	425	304	180	227	2739
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Read, Saw, Heard	Count	0	0	5	11	8	9	7	9	18	18	14	18	117
		Col%	.0%	.0%	.4%	1.2%	1.3%	1.0%	.6%	.9%	1.0%	1.3%	1.6%	1.8%	.8%
	Not Checked	Count	1654	1556	1379	923	594	859	1190	960	1764	1332	883	983	14077
		Col%	100.0%	100.0%	99.6%	98.8%	98.7%	99.0%	99.4%	99.1%	99.0%	98.7%	98.4%	98.2%	99.2%
	Total	Count	1654	1556	1384	934	602	868	1197	969	1782	1350	897	1001	14194
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-10. What Did Media Message Say? (Based On Those Who Responded To Item)

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Nighttime Enforcement	Count	1	29	6	20	2	2	4	8	6	8	1	0	87
		Col%	5.3%	33.0%	23.1%	37.7%	8.0%	11.1%	11.8%	23.5%	8.6%	11.8%	3.6%	.0%	16.9%
	General Enforcement	Count	3	25	5	13	6	3	11	13	16	26	8	16	145
		Col%	15.8%	28.4%	19.2%	24.5%	24.0%	16.7%	32.4%	38.2%	22.9%	38.2%	28.6%	31.4%	28.2%
	Click It Or Ticket	Count	2	26	12	17	10	12	17	10	37	26	16	25	210
		Col%	10.5%	29.5%	46.2%	32.1%	40.0%	66.7%	50.0%	29.4%	52.9%	38.2%	57.1%	49.0%	40.9%
	Buckle Up	Count	1	1	0	1	0	1	1	1	7	3	3	5	24
		Col%	5.3%	1.1%	.0%	1.9%	.0%	5.6%	2.9%	2.9%	10.0%	4.4%	10.7%	9.8%	4.7%
	Fine	Count	2	3	1	1	2	0	1	0	1	2	0	0	13
		Col%	10.5%	3.4%	3.8%	1.9%	8.0%	.0%	2.9%	.0%	1.4%	2.9%	.0%	.0%	2.5%
	Safety	Count	1	1	0	1	3	0	0	1	1	2	0	5	15
		Col%	5.3%	1.1%	.0%	1.9%	12.0%	.0%	.0%	2.9%	1.4%	2.9%	.0%	9.8%	2.9%
	Other	Count	9	3	2	0	2	0	0	1	2	1	0	0	20
		Col%	47.4%	3.4%	7.7%	.0%	8.0%	.0%	.0%	2.9%	2.9%	1.5%	.0%	.0%	3.9%
	Total	Count	19	88	26	53	25	18	34	34	70	68	28	51	514
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Nighttime Enforcement	Count	2	148	25	96	20	23	26	38	28	39	9	0	454
		Col%	2.3%	31.0%	10.9%	31.1%	16.3%	22.1%	16.3%	17.8%	10.7%	11.0%	6.3%	.0%	16.9%
	General Enforcement	Count	13	120	55	83	45	36	49	78	81	130	47	91	828
		Col%	14.9%	25.2%	24.0%	26.9%	36.6%	34.6%	30.6%	36.4%	30.9%	36.7%	32.6%	40.8%	30.8%
	Click It Or Ticket	Count	23	164	99	108	39	31	61	59	111	118	73	105	991
		Col%	26.4%	34.4%	43.2%	35.0%	31.7%	29.8%	38.1%	27.6%	42.4%	33.3%	50.7%	47.1%	36.9%
	Buckle Up	Count	15	14	17	8	6	6	15	17	27	20	8	10	163
		Col%	17.2%	2.9%	7.4%	2.6%	4.9%	5.8%	9.4%	7.9%	10.3%	5.6%	5.6%	4.5%	6.1%
	Fine	Count	13	17	11	8	3	5	7	5	2	10	2	1	84
		Col%	14.9%	3.6%	4.8%	2.6%	2.4%	4.8%	4.4%	2.3%	.8%	2.8%	1.4%	.4%	3.1%
	Safety	Count	3	5	4	4	6	3	2	6	4	7	4	7	55
		Col%	3.4%	1.0%	1.7%	1.3%	4.9%	2.9%	1.3%	2.8%	1.5%	2.0%	2.8%	3.1%	2.0%
	Other	Count	18	9	18	2	4	0	0	11	9	30	1	9	111
		Col%	20.7%	1.9%	7.9%	.6%	3.3%	.0%	.0%	5.1%	3.4%	8.5%	.7%	4.0%	4.1%
	Total	Count	87	477	229	309	123	104	160	214	262	354	144	223	2686
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-11. What Violation Think Person Stopped For During Daytime?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Speeding	Count	269	252	195	130	77	144	180	143	323	251	141	180	2285
		Col%	88.5%	85.1%	85.9%	87.2%	86.5%	94.1%	87.0%	93.5%	76.9%	85.1%	80.1%	80.0%	84.8%
	Seat Belt Violation	Count	8	17	16	11	1	5	8	4	25	15	13	20	143
		Col%	2.6%	5.7%	7.0%	7.4%	1.1%	3.3%	3.9%	2.6%	6.0%	5.1%	7.4%	8.9%	5.3%
	Drunk Driving	Count	5	8	4	0	1	0	2	2	17	5	3	5	52
		Col%	1.6%	2.7%	1.8%	.0%	1.1%	.0%	1.0%	1.3%	4.0%	1.7%	1.7%	2.2%	1.9%
	Reckless Driving	Count	5	4	4	2	3	1	5	2	38	5	6	4	79
		Col%	1.6%	1.4%	1.8%	1.3%	3.4%	.7%	2.4%	1.3%	9.0%	1.7%	3.4%	1.8%	2.9%
	Registration Violation	Count	4	3	3	0	2	1	2	2	7	3	3	4	34
		Col%	1.3%	1.0%	1.3%	.0%	2.2%	.7%	1.0%	1.3%	1.7%	1.0%	1.7%	1.8%	1.3%
	Other	Count	13	12	5	6	5	2	10	0	10	16	10	12	101
		Col%	4.3%	4.1%	2.2%	4.0%	5.6%	1.3%	4.8%	.0%	2.4%	5.4%	5.7%	5.3%	3.7%
	Total	Count	304	296	227	149	89	153	207	153	420	295	176	225	2694
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Speeding	Count	1474	1339	1223	821	518	760	1052	867	1398	1143	749	843	12187
		Col%	90.5%	87.7%	89.8%	89.5%	88.4%	90.4%	89.5%	94.0%	79.7%	86.6%	85.4%	85.7%	87.7%
	Seat Belt Violation	Count	41	70	65	36	14	32	39	30	81	58	37	52	555
		Col%	2.5%	4.6%	4.8%	3.9%	2.4%	3.8%	3.3%	3.3%	4.6%	4.4%	4.2%	5.3%	4.0%
	Drunk Driving	Count	12	22	10	1	4	1	4	7	41	8	5	7	122
		Col%	.7%	1.4%	.7%	.1%	.7%	.1%	.3%	.8%	2.3%	.6%	.6%	.7%	.9%
	Reckless Driving	Count	26	19	18	15	15	13	12	12	144	16	21	24	335
		Col%	1.6%	1.2%	1.3%	1.6%	2.6%	1.5%	1.0%	1.3%	8.2%	1.2%	2.4%	2.4%	2.4%
	Registration Violation	Count	11	6	5	2	5	8	9	6	35	17	17	12	133
		Col%	.7%	.4%	.4%	.2%	.9%	1.0%	.8%	.7%	2.0%	1.3%	1.9%	1.2%	1.0%
	Other	Count	65	71	41	42	30	27	60	0	55	78	48	46	563
		Col%	4.0%	4.6%	3.0%	4.6%	5.1%	3.2%	5.1%	.0%	3.1%	5.9%	5.5%	4.7%	4.1%
	Total	Count	1629	1527	1362	917	586	841	1176	922	1754	1320	877	984	13895
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-12. What Violation Think Person Stopped For During Nighttime?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Speeding	Count	147	134	115	79	47	73	114	80	171	142	79	95	1276
		Col%	48.7%	45.4%	50.7%	53.0%	52.8%	47.4%	56.2%	51.9%	40.5%	48.1%	44.1%	42.8%	47.4%
	Seat Belt Violation	Count	4	9	3	4	3	4	1	4	11	9	4	10	66
		Col%	1.3%	3.1%	1.3%	2.7%	3.4%	2.6%	.5%	2.6%	2.6%	3.1%	2.2%	4.5%	2.5%
	Drunk Driving	Count	111	115	91	53	27	62	66	59	162	102	69	88	1005
		Col%	36.8%	39.0%	40.1%	35.6%	30.3%	40.3%	32.5%	38.3%	38.4%	34.6%	38.5%	39.6%	37.3%
	Reckless Driving	Count	21	17	12	5	5	11	11	10	62	21	13	16	204
		Col%	7.0%	5.8%	5.3%	3.4%	5.6%	7.1%	5.4%	6.5%	14.7%	7.1%	7.3%	7.2%	7.6%
	Registration Violation	Count	1	2	2	0	0	0	0	1	5	3	2	1	17
		Col%	.3%	.7%	.9%	.0%	.0%	.0%	.0%	.6%	1.2%	1.0%	1.1%	.5%	.6%
	Other	Count	18	18	4	8	7	4	11	0	11	18	12	12	123
		Col%	6.0%	6.1%	1.8%	5.4%	7.9%	2.6%	5.4%	.0%	2.6%	6.1%	6.7%	5.4%	4.6%
	Total	Count	302	295	227	149	89	154	203	154	422	295	179	222	2691
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Speeding	Count	793	708	674	456	289	416	593	450	746	638	371	409	6543
		Col%	48.6%	46.5%	49.3%	49.7%	49.4%	48.9%	50.9%	49.0%	42.4%	48.4%	42.3%	41.5%	47.1%
	Seat Belt Violation	Count	18	37	16	25	13	16	8	13	40	30	16	34	266
		Col%	1.1%	2.4%	1.2%	2.7%	2.2%	1.9%	.7%	1.4%	2.3%	2.3%	1.8%	3.5%	1.9%
	Drunk Driving	Count	607	587	505	312	207	314	417	367	645	455	347	390	5153
		Col%	37.2%	38.5%	37.0%	34.0%	35.4%	36.9%	35.8%	39.9%	36.7%	34.5%	39.6%	39.6%	37.1%
	Reckless Driving	Count	124	105	113	65	42	68	81	84	251	102	72	97	1204
		Col%	7.6%	6.9%	8.3%	7.1%	7.2%	8.0%	6.9%	9.1%	14.3%	7.7%	8.2%	9.8%	8.7%
	Registration Violation	Count	10	9	7	3	2	3	2	5	11	8	5	7	72
		Col%	.6%	.6%	.5%	.3%	.3%	.4%	.2%	.5%	.6%	.6%	.6%	.7%	.5%
	Other	Count	79	77	51	57	32	34	65	0	65	85	66	48	659
		Col%	4.8%	5.1%	3.7%	6.2%	5.5%	4.0%	5.6%	.0%	3.7%	6.4%	7.5%	4.9%	4.7%
	Total	Count	1631	1523	1366	918	585	851	1166	919	1758	1318	877	985	13897
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-13. Compared To Day, How Often Wear Belt At Night?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	More	Count	21	13	10	13	4	9	8	7	30	21	26	31	193
		Col%	7.1%	4.4%	4.4%	8.7%	4.4%	6.0%	3.9%	4.3%	7.1%	7.3%	15.1%	14.0%	7.2%
	Less	Count	4	5	5	3	3	2	0	5	19	13	9	7	75
		Col%	1.3%	1.7%	2.2%	2.0%	3.3%	1.3%	.0%	3.1%	4.5%	4.5%	5.2%	3.2%	2.8%
	The Same	Count	272	275	211	134	83	140	196	150	372	253	137	184	2407
		Col%	91.6%	93.9%	93.4%	89.3%	92.2%	92.7%	96.1%	92.6%	88.4%	88.2%	79.7%	82.9%	90.0%
	Total	Count	297	293	226	150	90	151	204	162	421	287	172	222	2675
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	More	Count	86	65	53	55	35	43	59	35	100	59	79	67	736
		Col%	5.4%	4.3%	3.9%	6.0%	5.9%	5.1%	5.0%	3.7%	5.7%	4.6%	9.2%	7.1%	5.3%
	Less	Count	10	13	11	8	7	9	1	11	55	23	15	12	175
		Col%	.6%	.9%	.8%	.9%	1.2%	1.1%	.1%	1.2%	3.1%	1.8%	1.7%	1.3%	1.3%
	The Same	Count	1499	1443	1303	857	547	799	1121	910	1604	1212	766	864	12925
		Col%	94.0%	94.9%	95.3%	93.2%	92.9%	93.9%	94.9%	95.2%	91.2%	93.7%	89.1%	91.6%	93.4%
	Total	Count	1595	1521	1367	920	589	851	1181	956	1759	1294	860	943	13836
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-14. How Often Wear Seat Belt During Day?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Always	Count	276	271	202	138	73	135	185	135	332	254	155	197	2353
		Col%	91.4%	92.8%	89.4%	92.6%	83.0%	89.4%	90.2%	82.8%	79.0%	85.8%	88.6%	87.2%	87.4%
	Nearly Always	Count	20	15	14	10	11	11	13	19	56	28	10	19	226
		Col%	6.6%	5.1%	6.2%	6.7%	12.5%	7.3%	6.3%	11.7%	13.3%	9.5%	5.7%	8.4%	8.4%
	Sometimes	Count	2	4	5	1	3	4	3	5	26	10	4	5	72
		Col%	.7%	1.4%	2.2%	.7%	3.4%	2.6%	1.5%	3.1%	6.2%	3.4%	2.3%	2.2%	2.7%
	Seldom	Count	2	2	1	0	0	0	1	3	5	1	2	2	19
		Col%	.7%	.7%	.4%	.0%	.0%	.0%	.5%	1.8%	1.2%	.3%	1.1%	.9%	.7%
	Never	Count	2	0	4	0	1	1	3	1	1	3	4	3	23
		Col%	.7%	.0%	1.8%	.0%	1.1%	.7%	1.5%	.6%	.2%	1.0%	2.3%	1.3%	.9%
	Total	Count	302	292	226	149	88	151	205	163	420	296	175	226	2693
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Always	Count	1532	1451	1302	877	547	805	1117	913	1466	1214	822	927	12973
		Col%	94.1%	94.5%	94.9%	94.8%	92.9%	94.3%	94.9%	94.7%	82.9%	91.9%	93.5%	93.4%	92.6%
	Nearly Always	Count	74	67	51	43	32	37	44	40	211	78	34	44	755
		Col%	4.5%	4.4%	3.7%	4.6%	5.4%	4.3%	3.7%	4.1%	11.9%	5.9%	3.9%	4.4%	5.4%
	Sometimes	Count	13	12	9	3	8	11	7	7	71	23	13	14	191
		Col%	.8%	.8%	.7%	.3%	1.4%	1.3%	.6%	.7%	4.0%	1.7%	1.5%	1.4%	1.4%
	Seldom	Count	6	4	3	1	1	0	3	3	16	3	3	2	45
		Col%	.4%	.3%	.2%	.1%	.2%	.0%	.3%	.3%	.9%	.2%	.3%	.2%	.3%
	Never	Count	3	2	7	1	1	1	6	1	4	3	7	5	41
		Col%	.2%	.1%	.5%	.1%	.2%	.1%	.5%	.1%	.2%	.2%	.8%	.5%	.3%
	Total	Count	1628	1536	1372	925	589	854	1177	964	1768	1321	879	992	14005
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-15. How Often Wear Seat Belt At Night?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Always	Count	272	268	202	134	73	138	183	132	325	252	150	194	2323
		Col%	91.6%	94.0%	90.6%	93.1%	83.0%	91.4%	90.1%	83.5%	78.9%	86.3%	88.2%	87.4%	87.8%
	Nearly Always	Count	18	13	12	9	12	8	14	17	53	29	9	16	210
		Col%	6.1%	4.6%	5.4%	6.3%	13.6%	5.3%	6.9%	10.8%	12.9%	9.9%	5.3%	7.2%	7.9%
	Sometimes	Count	3	1	4	1	2	4	2	5	23	7	5	6	63
		Col%	1.0%	.4%	1.8%	.7%	2.3%	2.6%	1.0%	3.2%	5.6%	2.4%	2.9%	2.7%	2.4%
	Seldom	Count	2	3	1	0	0	0	1	3	11	1	1	2	25
		Col%	.7%	1.1%	.4%	.0%	.0%	.0%	.5%	1.9%	2.7%	.3%	.6%	.9%	.9%
	Never	Count	2	0	4	0	1	1	3	1	0	3	5	4	24
		Col%	.7%	.0%	1.8%	.0%	1.1%	.7%	1.5%	.6%	.0%	1.0%	2.9%	1.8%	.9%
	Total	Count	297	285	223	144	88	151	203	158	412	292	170	222	2645
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Always	Count	1516	1438	1287	852	532	794	1103	890	1437	1193	796	905	12743
		Col%	94.6%	95.5%	95.9%	95.3%	92.7%	95.4%	95.4%	94.9%	82.8%	92.5%	94.0%	94.0%	93.2%
	Nearly Always	Count	64	53	38	37	33	27	37	36	188	72	27	36	648
		Col%	4.0%	3.5%	2.8%	4.1%	5.7%	3.2%	3.2%	3.8%	10.8%	5.6%	3.2%	3.7%	4.7%
	Sometimes	Count	14	6	7	2	7	10	7	8	85	18	15	14	193
		Col%	.9%	.4%	.5%	.2%	1.2%	1.2%	.6%	.9%	4.9%	1.4%	1.8%	1.5%	1.4%
	Seldom	Count	6	6	3	1	1	0	3	3	23	3	2	2	53
		Col%	.4%	.4%	.2%	.1%	.2%	.0%	.3%	.3%	1.3%	.2%	.2%	.2%	.4%
	Never	Count	3	2	7	2	1	1	6	1	2	4	7	6	42
		Col%	.2%	.1%	.5%	.2%	.2%	.1%	.5%	.1%	.1%	.3%	.8%	.6%	.3%
	Total	Count	1603	1505	1342	894	574	832	1156	938	1735	1290	847	963	13679
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-16. Have You Increased Seat Belt Use Recently?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Yes	Count	71	71	68	35	20	33	40	33	74	72	51	55	623
		Col%	24.1%	24.6%	30.4%	23.5%	23.3%	21.9%	19.8%	20.5%	17.8%	24.5%	29.7%	25.5%	23.5%
	No	Count	223	218	156	114	66	118	162	128	341	222	121	161	2030
		Col%	75.9%	75.4%	69.6%	76.5%	76.7%	78.1%	80.2%	79.5%	82.2%	75.5%	70.3%	74.5%	76.5%
	Total	Count	294	289	224	149	86	151	202	161	415	294	172	216	2653
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Yes	Count	277	281	261	166	108	151	176	126	272	194	164	149	2325
		Col%	17.5%	18.5%	19.3%	18.4%	18.6%	18.0%	15.2%	13.4%	15.6%	15.1%	19.4%	15.7%	17.0%
	No	Count	1308	1235	1089	734	473	686	982	813	1474	1087	682	799	11362
		Col%	82.5%	81.5%	80.7%	81.6%	81.4%	82.0%	84.8%	86.6%	84.4%	84.9%	80.6%	84.3%	83.0%
	Total	Count	1585	1516	1350	900	581	837	1158	939	1746	1281	846	948	13687
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-17. How Strictly Is Belt Law Enforced During Day?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Very strictly	Count	144	165	131	82	47	78	100	78	139	132	82	107	1285
		Col%	47.7%	56.7%	57.7%	55.4%	53.4%	54.5%	49.3%	48.4%	33.4%	46.0%	47.4%	48.4%	48.3%
	Somewhat strictly	Count	115	99	72	54	28	47	81	65	176	110	63	79	989
		Col%	38.1%	34.0%	31.7%	36.5%	31.8%	32.9%	39.9%	40.4%	42.3%	38.3%	36.4%	35.7%	37.2%
	Not very strictly	Count	37	19	17	9	8	13	12	13	68	36	23	24	279
		Col%	12.3%	6.5%	7.5%	6.1%	9.1%	9.1%	5.9%	8.1%	16.3%	12.5%	13.3%	10.9%	10.5%
	Rarely	Count	5	3	6	3	3	2	9	1	20	4	2	5	63
		Col%	1.7%	1.0%	2.6%	2.0%	3.4%	1.4%	4.4%	.6%	4.8%	1.4%	1.2%	2.3%	2.4%
	Not at all	Count	1	5	1	0	2	3	1	4	13	5	3	6	44
		Col%	.3%	1.7%	.4%	.0%	2.3%	2.1%	.5%	2.5%	3.1%	1.7%	1.7%	2.7%	1.7%
	Total	Count	302	291	227	148	88	143	203	161	416	287	173	221	2660
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Very strictly	Count	765	804	760	479	283	427	552	462	667	589	416	467	6671
		Col%	48.1%	53.6%	56.2%	52.8%	49.2%	52.1%	48.3%	48.8%	38.6%	46.2%	48.5%	48.1%	48.8%
	Somewhat strictly	Count	618	540	447	338	224	301	443	376	716	494	309	368	5174
		Col%	38.8%	36.0%	33.0%	37.2%	39.0%	36.8%	38.7%	39.7%	41.4%	38.7%	36.1%	37.9%	37.9%
	Not very strictly	Count	170	128	117	71	52	75	116	78	249	152	107	105	1420
		Col%	10.7%	8.5%	8.6%	7.8%	9.0%	9.2%	10.1%	8.2%	14.4%	11.9%	12.5%	10.8%	10.4%
	Rarely	Count	32	17	23	16	11	9	27	23	65	29	20	18	290
		Col%	2.0%	1.1%	1.7%	1.8%	1.9%	1.1%	2.4%	2.4%	3.8%	2.3%	2.3%	1.9%	2.1%
	Not at all	Count	7	10	6	4	5	7	6	7	33	12	5	12	114
		Col%	.4%	.7%	.4%	.4%	.9%	.9%	.5%	.7%	1.9%	.9%	.6%	1.2%	.8%
	Total	Count	1592	1499	1353	908	575	819	1144	946	1730	1276	857	970	13669
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-18. How Strictly Is Belt Law Enforced During Night?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Very strictly	Count	134	165	116	81	46	79	92	77	135	133	83	104	1245
		Col%	45.3%	58.5%	53.0%	56.3%	52.9%	54.9%	46.9%	49.4%	32.8%	47.2%	48.8%	48.4%	47.8%
	Somewhat strictly	Count	114	78	65	45	25	44	74	56	136	100	56	68	861
		Col%	38.5%	27.7%	29.7%	31.3%	28.7%	30.6%	37.8%	35.9%	33.1%	35.5%	32.9%	31.6%	33.1%
	Not very strictly	Count	36	28	26	14	10	16	16	18	87	40	22	26	339
		Col%	12.2%	9.9%	11.9%	9.7%	11.5%	11.1%	8.2%	11.5%	21.2%	14.2%	12.9%	12.1%	13.0%
	Rarely	Count	8	5	11	3	4	2	13	2	32	5	5	8	98
		Col%	2.7%	1.8%	5.0%	2.1%	4.6%	1.4%	6.6%	1.3%	7.8%	1.8%	2.9%	3.7%	3.8%
	Not at all	Count	4	6	1	1	2	3	1	3	21	4	4	9	59
		Col%	1.4%	2.1%	.5%	.7%	2.3%	2.1%	.5%	1.9%	5.1%	1.4%	2.4%	4.2%	2.3%
	Total	Count	296	282	219	144	87	144	196	156	411	282	170	215	2602
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Very strictly	Count	734	778	700	457	274	417	519	444	633	593	409	450	6408
		Col%	46.9%	53.1%	53.1%	51.7%	49.0%	51.7%	46.7%	48.2%	37.3%	47.4%	48.9%	48.0%	48.0%
	Somewhat strictly	Count	585	497	430	324	199	289	415	348	613	439	286	334	4759
		Col%	37.4%	33.9%	32.6%	36.7%	35.6%	35.9%	37.3%	37.7%	36.1%	35.1%	34.2%	35.6%	35.6%
	Not very strictly	Count	192	154	133	79	64	81	133	91	289	166	110	112	1604
		Col%	12.3%	10.5%	10.1%	8.9%	11.4%	10.0%	12.0%	9.9%	17.0%	13.3%	13.2%	12.0%	12.0%
	Rarely	Count	42	24	51	16	17	12	36	30	106	41	25	24	424
		Col%	2.7%	1.6%	3.9%	1.8%	3.0%	1.5%	3.2%	3.3%	6.2%	3.3%	3.0%	2.6%	3.2%
	Not at all	Count	11	11	4	8	5	7	9	9	58	12	6	17	157
		Col%	.7%	.8%	.3%	.9%	.9%	.9%	.8%	1.0%	3.4%	1.0%	.7%	1.8%	1.2%
	Total	Count	1564	1464	1318	884	559	806	1112	922	1699	1251	836	937	13352
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-19. Ever Stopped By Police During The Day For Not Wearing Seat Belt?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Yes, I got a ticket	Count	43	51	50	26	15	16	33	26	57	32	24	31	404
		Col%	14.2%	17.7%	22.0%	17.6%	16.7%	10.8%	16.0%	16.1%	13.6%	11.0%	13.7%	13.9%	15.1%
	Yes, I got a warning	Count	8	14	13	9	3	4	7	4	33	8	13	10	126
		Col%	2.6%	4.9%	5.7%	6.1%	3.3%	2.7%	3.4%	2.5%	7.9%	2.8%	7.4%	4.5%	4.7%
	No	Count	251	223	164	113	72	128	166	131	329	250	138	182	2147
		Col%	83.1%	77.4%	72.2%	76.4%	80.0%	86.5%	80.6%	81.4%	78.5%	86.2%	78.9%	81.6%	80.2%
	Total	Count	302	288	227	148	90	148	206	161	419	290	175	223	2677
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Yes, I got a ticket	Count	128	168	135	96	51	66	99	81	158	125	79	78	1264
		Col%	7.9%	11.0%	9.9%	10.4%	8.7%	7.8%	8.5%	8.4%	9.0%	9.5%	9.0%	7.9%	9.1%
	Yes, I got a warning	Count	35	47	44	21	14	22	27	20	102	23	23	23	401
		Col%	2.2%	3.1%	3.2%	2.3%	2.4%	2.6%	2.3%	2.1%	5.8%	1.8%	2.6%	2.3%	2.9%
	No	Count	1464	1315	1191	804	524	758	1044	859	1501	1164	774	884	12282
		Col%	90.0%	85.9%	86.9%	87.3%	89.0%	89.6%	89.2%	89.5%	85.2%	88.7%	88.4%	89.7%	88.1%
	Total	Count	1627	1530	1370	921	589	846	1170	960	1761	1312	876	985	13947
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-20. Ever Stopped By Police At Night For Not Wearing Seat Belt?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Yes, I got a ticket	Count	8	9	16	7	3	3	8	7	18	15	7	8	109
		Col%	2.7%	3.2%	7.3%	5.0%	3.4%	2.0%	4.1%	4.6%	4.3%	5.3%	4.2%	3.7%	4.2%
	Yes, I got a warning	Count	6	6	4	2	4	3	5	1	19	6	9	7	72
		Col%	2.1%	2.2%	1.8%	1.4%	4.5%	2.0%	2.5%	.7%	4.6%	2.1%	5.4%	3.2%	2.8%
	No	Count	277	264	200	132	82	141	184	145	377	261	152	201	2416
		Col%	95.2%	94.6%	90.9%	93.6%	92.1%	95.9%	93.4%	94.8%	91.1%	92.6%	90.5%	93.1%	93.0%
	Total	Count	291	279	220	141	89	147	197	153	414	282	168	216	2597
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Yes, I got a ticket	Count	16	25	31	17	7	15	25	12	54	34	14	13	263
		Col%	1.0%	1.7%	2.4%	1.9%	1.2%	1.9%	2.2%	1.3%	3.1%	2.7%	1.7%	1.4%	2.0%
	Yes, I got a warning	Count	12	17	12	5	5	6	14	7	47	11	17	11	164
		Col%	.8%	1.2%	.9%	.6%	.9%	.7%	1.3%	.8%	2.7%	.9%	2.0%	1.2%	1.2%
	No	Count	1537	1423	1276	853	556	782	1079	890	1616	1214	807	925	12958
		Col%	98.2%	97.1%	96.7%	97.5%	97.9%	97.4%	96.5%	97.9%	94.1%	96.4%	96.3%	97.5%	96.8%
	Total	Count	1565	1465	1319	875	568	803	1118	909	1717	1259	838	949	13385
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-21. Have You Recently Noticed Increased Seat Belt Enforcement At Night?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Yes, I got a ticket	Count	9	9	6	5	0	4	5	6	11	10	9	13	87
		Col%	3.1%	3.1%	2.7%	3.4%	.0%	2.7%	2.5%	3.8%	2.7%	3.5%	5.2%	5.9%	3.3%
	Yes, I got a warning	Count	0	3	0	0	1	1	4	1	12	6	10	4	42
		Col%	.0%	1.0%	.0%	.0%	1.1%	.7%	2.0%	.6%	2.9%	2.1%	5.7%	1.8%	1.6%
	Yes, I noticed but wasn't stopped	Count	36	102	62	49	28	45	38	35	93	78	39	58	663
		Col%	12.2%	35.3%	27.4%	33.3%	31.5%	30.2%	18.8%	22.0%	22.6%	27.0%	22.4%	26.1%	25.0%
	No	Count	250	175	158	93	60	99	155	117	296	195	116	147	1861
		Col%	84.7%	60.6%	69.9%	63.3%	67.4%	66.4%	76.7%	73.6%	71.8%	67.5%	66.7%	66.2%	70.1%
	Total	Count	295	289	226	147	89	149	202	159	412	289	174	222	2653
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Yes, I got a ticket	Count	15	25	21	10	7	16	16	12	29	26	15	15	207
		Col%	1.0%	1.7%	1.6%	1.1%	1.2%	1.9%	1.4%	1.3%	1.7%	2.0%	1.7%	1.5%	1.5%
	Yes, I got a warning	Count	5	11	2	2	6	9	10	11	41	15	21	12	145
		Col%	.3%	.7%	.1%	.2%	1.0%	1.1%	.9%	1.2%	2.4%	1.2%	2.4%	1.2%	1.1%
	Yes, I noticed but wasn't stopped	Count	132	393	224	229	103	134	154	148	274	265	141	192	2389
		Col%	8.4%	26.2%	16.6%	25.3%	17.9%	15.9%	13.4%	15.6%	15.8%	20.4%	16.3%	19.8%	17.4%
	No	Count	1426	1070	1104	663	459	683	967	775	1385	991	688	751	10962
		Col%	90.4%	71.4%	81.7%	73.3%	79.8%	81.1%	84.3%	81.9%	80.1%	76.4%	79.5%	77.4%	80.0%
	Total	Count	1578	1499	1351	904	575	842	1147	946	1729	1297	865	970	13703
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-22. How Often Think Get Ticket For Not Wearing Seat Belt During Day?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Always	Count	86	98	60	46	28	45	54	49	81	66	47	55	715
		Col%	28.5%	34.0%	26.7%	31.1%	31.8%	30.4%	26.5%	31.8%	19.5%	23.2%	27.0%	25.7%	27.0%
	Nearly Always	Count	50	45	52	36	13	40	43	32	66	61	30	41	509
		Col%	16.6%	15.6%	23.1%	24.3%	14.8%	27.0%	21.1%	20.8%	15.9%	21.5%	17.2%	19.2%	19.2%
	Sometimes	Count	95	107	71	51	32	39	70	41	150	98	62	73	889
		Col%	31.5%	37.2%	31.6%	34.5%	36.4%	26.4%	34.3%	26.6%	36.1%	34.5%	35.6%	34.1%	33.6%
	Seldom	Count	44	26	24	10	11	13	28	22	84	35	23	23	343
		Col%	14.6%	9.0%	10.7%	6.8%	12.5%	8.8%	13.7%	14.3%	20.2%	12.3%	13.2%	10.7%	13.0%
	Never	Count	27	12	18	5	4	11	9	10	35	24	12	22	189
		Col%	8.9%	4.2%	8.0%	3.4%	4.5%	7.4%	4.4%	6.5%	8.4%	8.5%	6.9%	10.3%	7.1%
	Total	Count	302	288	225	148	88	148	204	154	416	284	174	214	2645
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Always	Count	513	518	480	313	206	279	351	304	409	367	269	293	4302
		Col%	32.1%	34.2%	35.7%	34.8%	35.7%	33.9%	30.5%	32.7%	23.6%	28.8%	31.2%	30.6%	31.5%
	Nearly Always	Count	291	291	256	187	93	158	248	186	341	237	160	181	2629
		Col%	18.2%	19.2%	19.1%	20.8%	16.1%	19.2%	21.5%	20.0%	19.7%	18.6%	18.6%	18.9%	19.2%
	Sometimes	Count	482	471	405	258	172	241	344	275	604	431	243	298	4224
		Col%	30.2%	31.1%	30.2%	28.7%	29.8%	29.2%	29.9%	29.6%	34.8%	33.8%	28.2%	31.1%	30.9%
	Seldom	Count	196	128	112	86	70	84	131	96	250	144	105	101	1503
		Col%	12.3%	8.5%	8.3%	9.6%	12.1%	10.2%	11.4%	10.3%	14.4%	11.3%	12.2%	10.6%	11.0%
	Never	Count	116	105	90	56	36	62	77	68	131	96	84	84	1005
		Col%	7.3%	6.9%	6.7%	6.2%	6.2%	7.5%	6.7%	7.3%	7.6%	7.5%	9.8%	8.8%	7.4%
	Total	Count	1598	1513	1343	900	577	824	1151	929	1735	1275	861	957	13663
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-23. How Often Think Get Ticket For Not Wearing Seat Belt At Night?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	Always	Count	81	90	57	45	26	45	53	48	72	63	47	56	683
		Col%	28.0%	32.6%	26.6%	32.1%	29.9%	31.7%	27.0%	32.7%	17.9%	23.1%	28.8%	27.3%	26.9%
	Nearly Always	Count	40	39	38	29	15	32	33	23	60	56	22	34	421
		Col%	13.8%	14.1%	17.8%	20.7%	17.2%	22.5%	16.8%	15.6%	14.9%	20.5%	13.5%	16.6%	16.6%
	Sometimes	Count	88	92	63	42	28	32	66	40	127	77	53	62	770
		Col%	30.4%	33.3%	29.4%	30.0%	32.2%	22.5%	33.7%	27.2%	31.5%	28.2%	32.5%	30.2%	30.4%
	Seldom	Count	48	38	33	15	11	22	33	25	87	49	30	29	420
		Col%	16.6%	13.8%	15.4%	10.7%	12.6%	15.5%	16.8%	17.0%	21.6%	17.9%	18.4%	14.1%	16.6%
	Never	Count	32	17	23	9	7	11	11	11	57	28	11	24	241
		Col%	11.1%	6.2%	10.7%	6.4%	8.0%	7.7%	5.6%	7.5%	14.1%	10.3%	6.7%	11.7%	9.5%
	Total	Count	289	276	214	140	87	142	196	147	403	273	163	205	2535
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	Always	Count	498	491	463	297	194	279	336	296	384	362	270	285	4155
		Col%	32.2%	33.7%	35.7%	34.5%	34.8%	35.6%	30.6%	33.4%	22.9%	29.3%	32.7%	31.1%	31.6%
	Nearly Always	Count	259	239	210	153	88	126	200	156	288	216	125	146	2206
		Col%	16.8%	16.4%	16.2%	17.8%	15.8%	16.1%	18.2%	17.6%	17.2%	17.5%	15.1%	16.0%	16.8%
	Sometimes	Count	416	425	362	233	151	206	315	243	510	359	207	276	3703
		Col%	26.9%	29.2%	27.9%	27.1%	27.1%	26.3%	28.7%	27.4%	30.4%	29.1%	25.1%	30.2%	28.2%
	Seldom	Count	240	190	155	111	82	107	160	115	329	192	130	114	1925
		Col%	15.5%	13.0%	12.0%	12.9%	14.7%	13.7%	14.6%	13.0%	19.6%	15.6%	15.7%	12.5%	14.7%
	Never	Count	132	112	107	66	43	65	87	77	166	105	94	94	1148
		Col%	8.5%	7.7%	8.2%	7.7%	7.7%	8.3%	7.9%	8.7%	9.9%	8.5%	11.4%	10.3%	8.7%
	Total	Count	1545	1457	1297	860	558	783	1098	887	1677	1234	826	915	13137
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-24. What Percentage Of Time Would You Be Stopped For Drunk Driving During Day?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total
Male 18-34	100%	Count	72	60	47	36	21	30	43	31	73	58	51	49	571
		Col%	24.2%	21.3%	21.6%	25.0%	24.1%	20.8%	22.1%	20.3%	17.8%	20.7%	29.8%	23.1%	22.0%
	75%	Count	51	52	46	24	16	35	37	22	76	39	31	46	475
		Col%	17.1%	18.4%	21.1%	16.7%	18.4%	24.3%	19.0%	14.4%	18.5%	13.9%	18.1%	21.7%	18.3%
	50%	Count	62	65	42	35	19	34	42	33	92	80	29	47	580
		Col%	20.8%	23.0%	19.3%	24.3%	21.8%	23.6%	21.5%	21.6%	22.4%	28.6%	17.0%	22.2%	22.4%
	25%	Count	23	30	32	26	8	15	29	20	65	42	23	23	336
		Col%	7.7%	10.6%	14.7%	18.1%	9.2%	10.4%	14.9%	13.1%	15.8%	15.0%	13.5%	10.8%	12.9%
	10%	Count	18	21	12	3	8	8	15	15	35	17	11	10	173
		Col%	6.0%	7.4%	5.5%	2.1%	9.2%	5.6%	7.7%	9.8%	8.5%	6.1%	6.4%	4.7%	6.7%
	<10%	Count	45	33	23	16	8	11	12	20	40	20	14	18	260
		Col%	15.1%	11.7%	10.6%	11.1%	9.2%	7.6%	6.2%	13.1%	9.7%	7.1%	8.2%	8.5%	10.0%
	0%	Count	27	21	16	4	7	11	17	12	30	24	12	19	200
		Col%	9.1%	7.4%	7.3%	2.8%	8.0%	7.6%	8.7%	7.8%	7.3%	8.6%	7.0%	9.0%	7.7%
	Total	Count	298	282	218	144	87	144	195	153	411	280	171	212	2595
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	100%	Count	393	332	321	228	140	188	277	211	371	287	238	237	3223
		Col%	25.5%	22.9%	24.7%	26.4%	24.9%	23.5%	25.0%	23.5%	21.7%	23.1%	28.7%	25.6%	24.4%
	75%	Count	266	265	253	149	116	164	182	174	349	213	136	173	2440
		Col%	17.3%	18.3%	19.5%	17.3%	20.6%	20.5%	16.4%	19.4%	20.4%	17.2%	16.4%	18.7%	18.5%
	50%	Count	360	345	313	187	132	184	260	200	384	322	165	212	3064
		Col%	23.4%	23.8%	24.1%	21.7%	23.5%	23.0%	23.5%	22.2%	22.5%	25.9%	19.9%	22.9%	23.2%
	25%	Count	166	179	156	96	52	89	130	102	213	150	98	105	1536
		Col%	10.8%	12.4%	12.0%	11.1%	9.3%	11.1%	11.7%	11.3%	12.5%	12.1%	11.8%	11.3%	11.6%
	10%	Count	95	84	51	42	30	32	67	63	119	64	45	39	731
		Col%	6.2%	5.8%	3.9%	4.9%	5.3%	4.0%	6.1%	7.0%	7.0%	5.2%	5.4%	4.2%	5.5%
	<10%	Count	126	113	107	74	50	81	92	89	136	100	63	68	1099
		Col%	8.2%	7.8%	8.2%	8.6%	8.9%	10.1%	8.3%	9.9%	8.0%	8.1%	7.6%	7.3%	8.3%
	0%	Count	133	129	98	87	42	62	99	60	137	105	85	92	1129
		Col%	8.6%	8.9%	7.5%	10.1%	7.5%	7.8%	8.9%	6.7%	8.0%	8.5%	10.2%	9.9%	8.5%
	Total	Count	1539	1447	1299	863	562	800	1107	899	1709	1241	830	926	13222
		Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table D-25. What Percentage Of Time Would You Be Stopped For Drunk Driving At Night?

			May 07	Jun 07	Sep 07	Nov 07	Feb 08	Mar 08	Apr 08	Jul 08	Oct 08	Dec 08	May 09	Jun 09	Total		
Male 18-34	100%	Count	90	78	55	48	24	42	52	39	98	73	54	60	713		
		Col%	30.6%	28.0%	25.7%	34.5%	27.6%	29.4%	27.4%	25.7%	24.1%	26.4%	32.5%	28.4%	27.9%		
		75%	Count	68	67	61	28	20	42	46	33	94	72	35	57	623	
			Col%	23.1%	24.0%	28.5%	20.1%	23.0%	29.4%	24.2%	21.7%	23.2%	26.1%	21.1%	27.0%	24.4%	
		50%	Count	46	62	42	32	17	26	41	33	91	58	35	42	525	
			Col%	15.6%	22.2%	19.6%	23.0%	19.5%	18.2%	21.6%	21.7%	22.4%	21.0%	21.1%	19.9%	20.5%	
		25%	Count	17	23	18	12	6	11	18	13	46	27	11	19	221	
			Col%	5.8%	8.2%	8.4%	8.6%	6.9%	7.7%	9.5%	8.6%	11.3%	9.8%	6.6%	9.0%	8.6%	
		10%	Count	18	11	8	4	6	3	9	10	20	9	10	5	113	
			Col%	6.1%	3.9%	3.7%	2.9%	6.9%	2.1%	4.7%	6.6%	4.9%	3.3%	6.0%	2.4%	4.4%	
		<10%	Count	34	18	15	12	8	9	6	14	28	17	9	11	181	
			Col%	11.6%	6.5%	7.0%	8.6%	9.2%	6.3%	3.2%	9.2%	6.9%	6.2%	5.4%	5.2%	7.1%	
		0%	Count	21	20	15	3	6	10	18	10	29	20	12	17	181	
			Col%	7.1%	7.2%	7.0%	2.2%	6.9%	7.0%	9.5%	6.6%	7.1%	7.2%	7.2%	8.1%	7.1%	
		Total	Count	294	279	214	139	87	143	190	152	406	276	166	211	2557	
			Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	Total	100%	Count	469	407	376	272	163	234	317	248	442	337	259	287	3811	
			Col%	30.7%	28.5%	29.4%	31.9%	29.1%	29.6%	29.1%	27.8%	26.2%	27.6%	32.2%	31.3%	29.2%	
			75%	Count	368	356	336	206	157	197	249	235	428	315	187	228	3262
				Col%	24.1%	24.9%	26.3%	24.2%	28.0%	24.9%	22.9%	26.4%	25.4%	25.8%	23.3%	24.9%	25.0%
		50%	Count	301	310	262	153	95	153	233	185	333	259	145	179	2608	
			Col%	19.7%	21.7%	20.5%	17.9%	17.0%	19.3%	21.4%	20.8%	19.8%	21.2%	18.0%	19.5%	20.0%	
		25%	Count	116	118	109	56	51	60	92	69	168	100	65	64	1068	
			Col%	7.6%	8.3%	8.5%	6.6%	9.1%	7.6%	8.5%	7.7%	10.0%	8.2%	8.1%	7.0%	8.2%	
		10%	Count	67	38	37	30	25	21	45	27	62	42	27	28	449	
			Col%	4.4%	2.7%	2.9%	3.5%	4.5%	2.7%	4.1%	3.0%	3.7%	3.4%	3.4%	3.1%	3.4%	
		<10%	Count	85	76	66	55	33	67	58	72	117	69	47	41	786	
			Col%	5.6%	5.3%	5.2%	6.4%	5.9%	8.5%	5.3%	8.1%	6.9%	5.6%	5.8%	4.5%	6.0%	
		0%	Count	123	125	92	81	36	59	94	55	136	101	74	90	1066	
			Col%	8.0%	8.7%	7.2%	9.5%	6.4%	7.5%	8.6%	6.2%	8.1%	8.3%	9.2%	9.8%	8.2%	
		Total	Count	1529	1430	1278	853	560	791	1088	891	1686	1223	804	917	13050	
			Col%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

APPENDIX E: ARIMA TABLES

The overall crash rates were log transformed prior to analysis to help achieve stationarity of variance and aid in interpretation of the ARIMA intervention parameters. The percentage change in the Washington crash series associated with each intervention was calculated from the log-transformed series using $(1 - e^b) \times 100$, where the exponent b is the ARIMA parameter estimate for the primary enforcement or NTSBE intervention.

**Washington Overall Passenger Vehicle Occupant Fatality Rates per 100 Million VMT
1994–2008 (Monthly)**

Model component	Parameter	Lag	Estimate	t	p
No comparison series ^a					
Primary enforcement	ω	0	-0.1238	-2.27	.0245*
NTSBE	ω	0	-0.1738	-3.18	.0018*
Noise	MA	12	0.7902	16.30	<.0001*
Constant			-0.0132	-1.95	.0529
Oregon comparison series					
Primary enforcement	ω	0	-0.2303	-6.27	<.0001*
NTSBE	ω	0	-0.1901	-3.09	.0023*
Oregon series	B	0	0.0559	0.90	.3694
Noise	AR	12	0.3195	4.07	<.0001*
California comparison series					
Primary enforcement	ω	0	-0.1704	-5.50	<.0001*
NTSBE	ω	0	-0.0731	-1.24	.2166
California series	B	0	0.4707	5.23	<.0001*
All other primary jurisdictions comparison series					
Primary enforcement	ω	0	-0.1070	-2.87	.0046*
NTSBE	ω	0	-0.0781	-1.41	.1603
All primary states	B	0	0.9532	6.48	<.0001*
Constant			-0.1456	-5.38	<.0001*

Note. The interventions were modeled as sudden-permanent effects. Adjustments for outliers were used in all analyses.

^aSeries was seasonally differenced to remove trend.

* $p < 0.05$, two-tailed. † $p < 0.10$, two-tailed (approached statistical significance).

**Washington Overall Passenger Vehicle Occupant Fatality Rates per 100,000 Licensed Drivers
1994–2008 (Monthly)**

Model component	Parameter	Lag	Estimate	<i>T</i>	<i>p</i>
No comparison series ^a					
Primary enforcement	ω	0	-0.1542	-2.80	.0057*
NTSBE	ω	0	-0.2268	-4.11	<.0001*
Noise	MA	12	0.7844	15.33	<.0001*
Constant			-0.0151	-2.15	.0330*
Oregon comparison series					
Primary enforcement	ω	0	-0.2319	-6.25	<.0001*
NTSBE	ω	0	-0.2303	-3.68	.0003*
Oregon series	β	0	0.0799	1.30	.1954
Noise	AR	12	0.3126	3.92	.0001*
California comparison series					
Primary enforcement	ω	0	-0.2459	-8.81	<.0001*
NTSBE	ω	0	-0.0827	-1.32	.1885
California series	β	0	0.6100	5.63	<.0001*
All other primary jurisdictions comparison series					
Primary enforcement	ω	0	-0.1949	-5.42*	<.0001*
NTSBE	ω	0	-0.1216	-2.10*	.0371*
All primary states	β	0	0.9657	6.14*	<.0001*
Constant			-0.2567	-5.01*	<.0001*

Note. The interventions were modeled as sudden-permanent effects. Adjustments for outliers were used in all analyses.

^aSeries was seasonally differenced to remove trend.

* $p < 0.05$, two-tailed. † $p < 0.10$, two-tailed (approached statistical significance).

**Washington Nighttime and Daytime Total Occupant Fatalities
January 1994–June 2009 (monthly)**

Model component	Parameter	Lag	Estimate	<i>t</i>	<i>p</i>
Nighttime					
Primary enforcement	ω	0	-2.4738	-2.03	.0439*
NTSBE	ω	0	-3.3612	-2.27	.0245*
Noise	AR	1	0.1726	2.28	.0239*
Noise	AR	12	0.3304	4.63	<.0001*
Constant			20.0989	23.20	<.0001*
Daytime					
Primary enforcement	ω	0	-2.1034	-2.46	.0148*
NTSBE	ω	0	-4.0889	-3.33	.0010*
Constant			20.0000	38.88	<.0001*
Nighttime controlling for daytime					
Primary enforcement	ω	0	-2.0825	-1.77	.0786†
NTSBE	ω	0	-2.8709	-1.95	.0529†
Daytime series	β	0	0.1356	2.21	.0285*
Noise	AR	1	0.1723	2.27	.0245*
Noise	AR	12	0.2860	3.87	.0001*
Constant			17.3034	11.52	<.0001*
Nighttime percentage of total fatalities					
Primary enforcement	ω	0	-0.3219	-0.23	.8183
NTSBE	ω	0	1.2198	0.60	.5492
Constant			50.1870	59.18	<.0001*

Note. The interventions were modeled as sudden-permanent effects. Adjustments for outliers were used in all analyses.

* $p < 0.05$, two-tailed. † $p < 0.10$, two-tailed (approached statistical reliability).

**Washington Nighttime and Daytime Fatally Injured Occupant Belt Use
January 1994–June 2009 (monthly)**

Model component	Parameter	Lag	Estimate	<i>T</i>	<i>p</i>
Nighttime					
Primary enforcement	ω	0	16.3781	8.10	<.0001*
NTSBE	ω	0	4.0404	1.39	.1662
Constant			28.9416	23.76	<.0001*
Daytime					
Primary enforcement	ω	0	15.1951	8.52	<.0001*
NTSBE	ω	0	6.1016	2.39	.0179*
Constant			51.5074	47.99	<.0001*
Nighttime controlling for daytime					
Primary enforcement	ω	0	15.4732	6.49	<.0001*
NTSBE	ω	0	3.6464	1.24	.2166
Daytime series	B	0	0.0596	0.72	.4724
Constant			25.8737	5.81	<.0001*

Note. The interventions were modeled as sudden-permanent effects. Adjustments for outliers were used in all analyses.
**p* < 0.05, two-tailed. †*p* < 0.10, two-tailed (approached statistical reliability).

**Washington Nighttime and Daytime Fatal-Crash-Involved Occupant Belt Use
January 1994–June 2009 (monthly)**

Model component	Parameter	Lag	Estimate	<i>T</i>	<i>p</i>
Nighttime					
Primary enforcement	ω	0	15.5469	8.66	<.0001*
NTSBE	ω	0	4.4741	1.74	.0835†
Constant			47.2316	43.70	<.0001*
Daytime					
Primary enforcement	ω	0	13.7442	10.26	<.0001*
NTSBE	ω	0	7.1837	3.74	.0002*
Constant			66.3120	82.25	<.0001*
Nighttime controlling for daytime					
Primary enforcement	ω	0	12.6103	5.80	<.0001*
NTSBE	ω	0	2.3722	0.88	.3800
Daytime series	B	0	0.2540	2.71	.0074*
Constant			30.1139	4.80	<.0001*

Note. The interventions were modeled as sudden-permanent effects. Adjustments for outliers were used in all analyses.
**p* < 0.05, two-tailed. †*p* < 0.10, two-tailed (approached statistical reliability).



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