

Evaluation of  
**M**aine's Seat Belt Law Change  
From Secondary to Primary Enforcement



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16. Abstract  <p style="text-align: justify;">                     Maine upgraded its seat belt law to primary enforcement on September 20, 2007. Both daytime and nighttime observed belt use increased in the months following implementation of the law (daytime 77% to 84%; night 69% to 81%). Although daytime belt use was generally higher, nighttime belt use showed a greater increase than daytime belt use. Awareness surveys indicated that Maine motorists were clearly aware of the law change and its consequences. Survey respondents also indicated having heard both messages about enforcement and messages encouraging belt use. Focus groups with representatives of a number of police departments showed that police responded positively to the change in law. Police also reported a positive change in motorists' belt use behavior in the months following the law change.                 </p>			
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## TECHNICAL SUMMARY

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Evaluation of Maine's Seat Belt Law Change From Secondary to Primary Enforcement

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### REPORT AUTHORS

Neil K. Chaudhary, Julie Tison, Tara Casanova

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### **Background**

Maine upgraded its seat belt law from secondary to primary effective September 20, 2007, with an educational grace period to April 1, 2008. The current study evaluated the effect of the law change on daytime and nighttime seat belt use, public awareness, and police attitudes. Data were collected both before and after the enforcement of the law and immediately following Maine's *Click It or Ticket* May 2008 mobilization.

Implementation of seat belt laws and upgrades to primary laws increase daytime seat belt use. However, as of yet, there has not been an evaluation of the effect of a primary law upgrade on day *and* night seat belt use among the general population in terms of observed belt use rates, motorist knowledge and attitudes as well as police experience with the law. Previous studies have shown that belt use at night is consistently lower than during the day and that night enforcement can increase night belt use. There is also some evidence that a law upgrade to primary can produce equal or greater increases in night belt use as compared to belt use during daylight hours.

### **Method**

This evaluation consisted of three parts: awareness surveys, seat belt observations, and police focus groups. Awareness surveys and seat belt observations occurred over three waves. Wave 1 took place in late February 2008, when the primary law upgrade had already gone into effect but police could only issue warnings (unless another violation also occurred). Wave 2 took place in late April and early May – at this time the police were allowed to enforce seat belt violations under the primary law rules. The final Wave 3 took place after May 30, following the nationwide *Click It or Ticket* mobilization.

Awareness data collection took place at eight BMV (Bureau of Motor Vehicle) offices across the State. The one-page questionnaire was distributed while the motorists were waiting for their transactions to be completed. Once the survey was completed, respondents dropped it in a

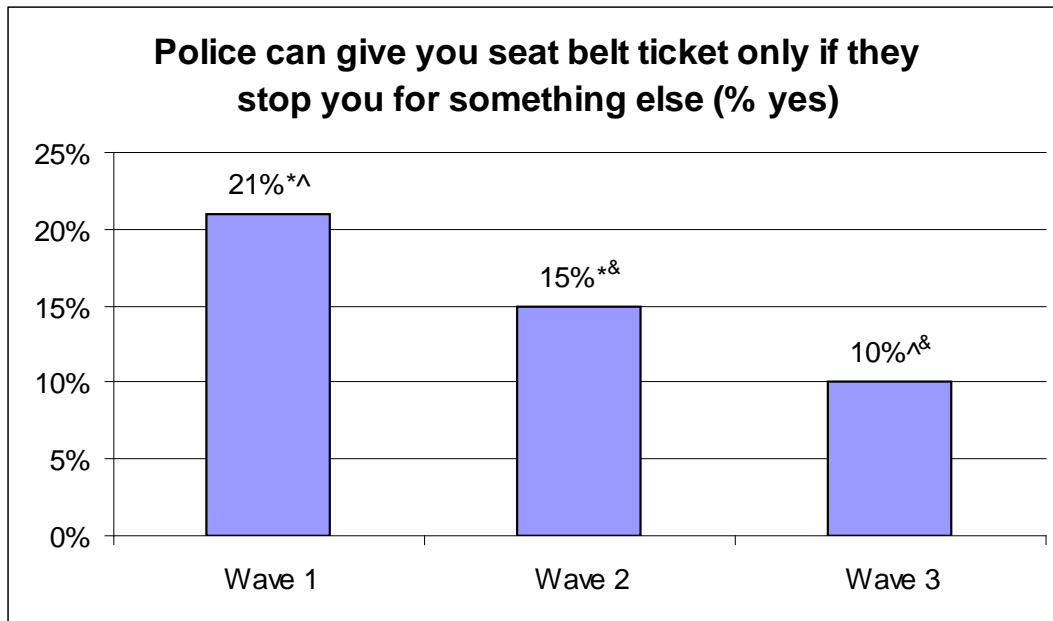
survey box. Survey data were later entered and analyzed by Preusser Research Group (PRG) staff members.

Statewide belt use was evaluated by observations conducted at 40 sites in 10 counties throughout the State. Daytime observations took place between 7 a.m. and 5:45 p.m.; nighttime observations started at 9 p.m. and ended at 4 a.m.

Police focus groups occurred during Wave 1 and Wave 3. Interviews with representatives from six law enforcement agencies took place before and after the law went into full effect (i.e., citation issued on belt violation alone). PRG staff visited with members of police departments in Brewer, Waterville, Augusta, Biddeford, and York, as well as with members of the Maine State Police. Topics covered in these discussions included level of participation in seat belt enforcement mobilizations, description of enforcement under secondary law, and changes in enforcement activity since the law change as well as changes in enforcement tactics. The interviewer also obtained information on police opinion about the law change as well as motorist reaction to the law change as perceived by members of the police force.

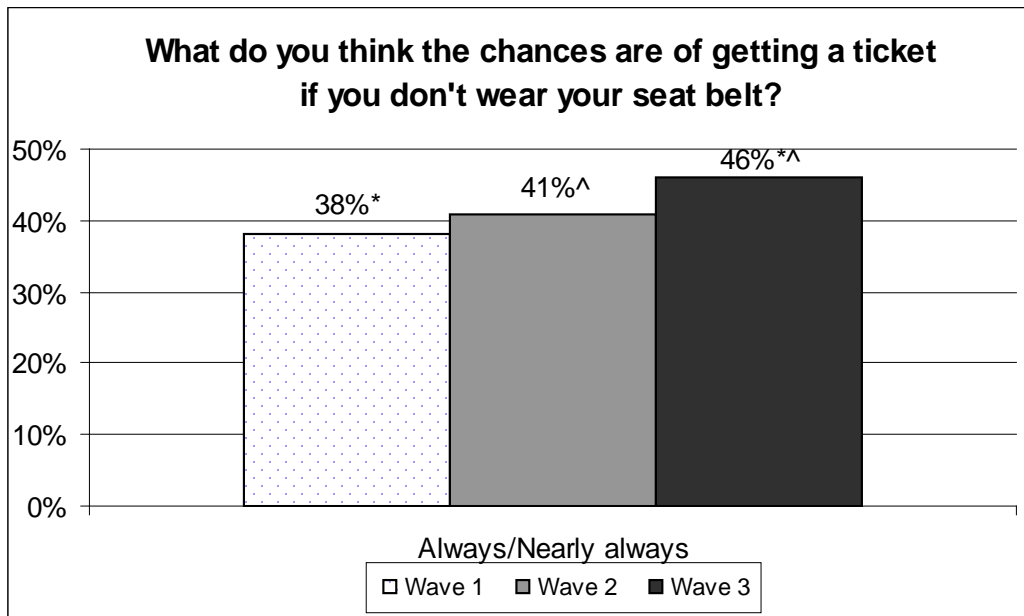
## Results

Awareness surveys showed that Maine drivers were aware of the law change and were cognizant of its consequences. The percentage of respondents who believed that *police can give you a seat belt ticket only if they stop you for something else* decreased significantly across waves.



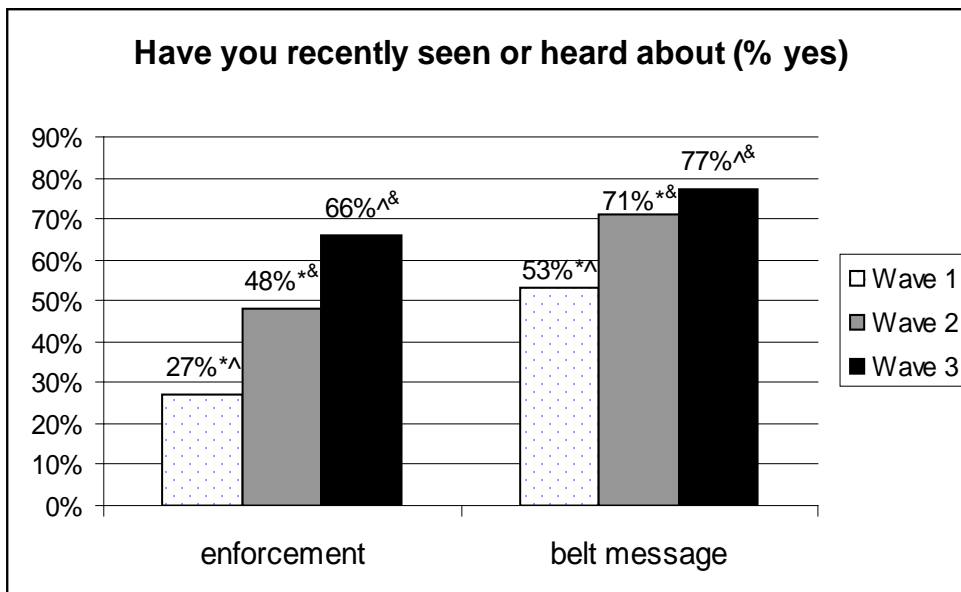
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Motorists also felt there was an increase in strictness of enforcement. In fact, perception of enforcement certainty, both at the local and State levels, increased.



Note: Data sharing superscripts are significantly different,  $p < .01$ .

Proportion of respondents reporting having heard messages about increased enforcement and messages encouraging belt use also increased over time. There was also a clearly marked increase in the percentage of respondents recognizing the slogan *Click It or Ticket*, going from 38% in Wave 1 to 46% in Wave 2, and reaching a high of 64% after the May mobilization.

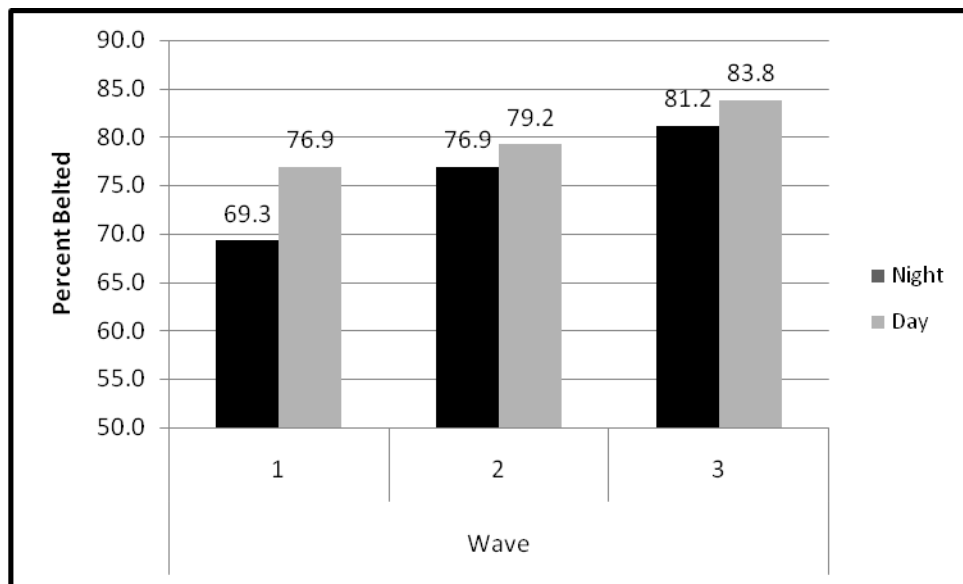


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There were approximately 27,000 belt observations: 23,000 during the day and 4,000 at night. Seat belt observation data showed that belt use increased from each wave to the next

during both day and night. Daytime belt use showed an increase from 77% in Wave 1 (pre-enforcement) to 79% in Wave 2 (post-enforcement). Both of these rates were significantly less than the Wave 3 rate (post -*Click It or Ticket*) of 84%. The increase from Wave 1 to Wave 2 was also significant. Belt use at night during Wave 3 (81%) was significantly higher than belt use at night in Wave 1 (69%) and Wave 2 (77%). Wave 2 was also significantly greater than Wave 1.

Results of a regression analysis suggest that there was a slightly greater influence of the change to primary enforcement on night belt use than on day belt use. This regression analysis also confirmed an overall increase in belt use across waves and indicated that day belt use was significantly higher than night belt use overall. Thus, although daytime belt use is higher in general, the impact of the law change was greater for night belt use than day belt use. Almost all demographic groups were affected across waves. Only pickup trucks at night show no evidence of an increase in belt use.



In summary, Maine drivers were aware of the law change and adjusted their behavior accordingly. Belt use increased during daylight hours and, consistent with the experience of other States, increased even more at night when crash risk per mile driven is at its highest. These results should be of particular interest to those States that still have a secondary belt use enforcement law and are considering upgrading to primary.

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## **I. Introduction**

Maine is one of 16 States to have upgraded its seat belt law to primary enforcement since 1997. As of July 2008, 26 States, the District of Columbia, and Puerto Rico had primary enforcement laws. Having a primary seat belt law allows law enforcement to issue a belt citation upon observation of a seat belt violation alone. With secondary seat belt laws, police must first observe another violation (e.g., speeding) before being able to issue a seat belt citation.

### **A. Effects of Primary Law Upgrades**

Primary laws have been associated with a higher percentage of observed seat belt use (e.g., Ulmer et al., 1995) and higher belt use in daytime fatalities (Tison & Williams, under review). In 2007, States with primary laws had an average observed seat belt usage rate about 7 percentage points higher than those with secondary laws (based on NHTSA, 2008).

The public tends to support seat belt laws. The NHTSA 2007 Motor Vehicle Occupant Safety Survey (MVOSS) reports that 88% of those interviewed favor front-seat occupant seat belt laws. Support for these laws is even greater in some minority groups (African-American: 93%, Latino: 95%). The public also recognizes the safety benefits of the seat belt; 95% agreed that they would want their seat belts on if they were in a crash.

Strict enforcement of belt laws has been associated with higher belt use rates. Campbell (1988) demonstrated an association between seat belt usage rates and increasing levels of enforcement. This association was stronger for States with primary laws than secondary laws. Tison and Williams (under review) also demonstrated that higher changes in belt use in the period from 2000 to 2006 were associated with higher enforcement levels. Even the perception of high levels of enforcement has been associated with higher belt use. Chaudhary and others (2004) demonstrated that those individuals who perceive their chances of being ticketed as higher also tend to report using their seat belts more often. Given that primary enforcement allows for easier and stricter enforcement of the law, and given that primary laws lead to a more accurate knowledge of the law (NHTSA, 1996) one would expect primary laws to lead to (1) more enforcement of the law, and (2) a perception of more enforcement; both of which result in increased belt use.

Other research asserts that mandatory seat belts laws – especially primary laws – reduce crash severity. Wagenaar and others (1988) demonstrated a decrease in reported traffic fatalities following enactment of primary seat belt laws. Enactment of primary mandatory seat belt laws led to a greater reduction in fatalities than did passage of secondary laws. Evans and Graham (1991) reported similar findings. Passage of a primary law led to a 20% decrease in fatalities while secondary law implementation led to a decrease of only 7%.

Many States have changed their laws from secondary to primary. With the exception of Indiana, every State that changed its law from secondary to primary law had a minimum of an 11 percentage point increase in belt use (e.g., Ulmer et al., 1995). Indiana, the exception, had a 10-

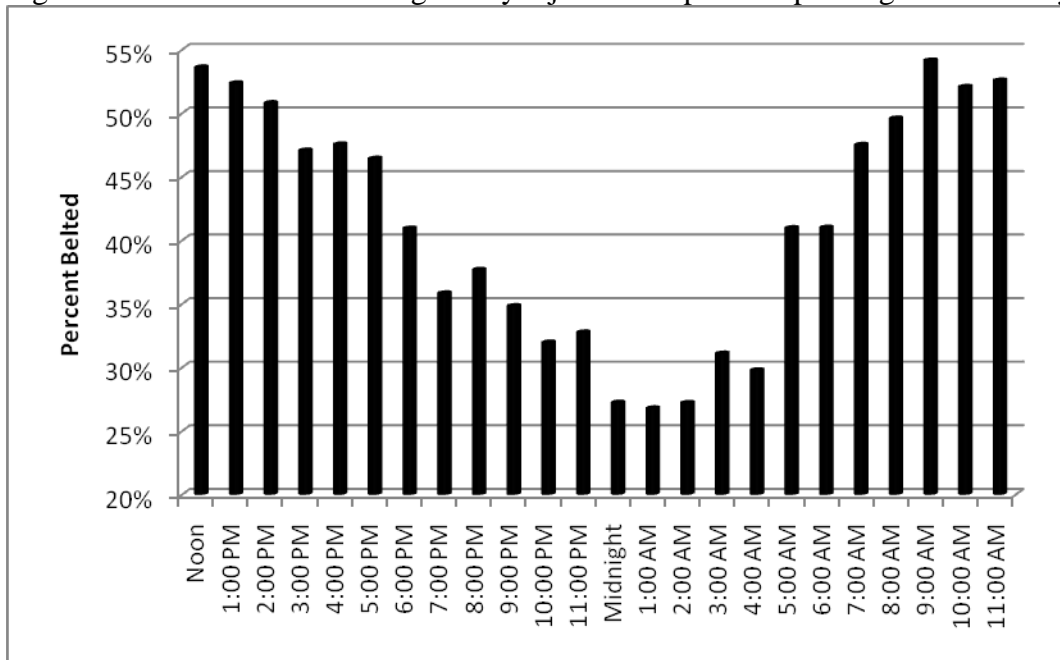
percentage-point *drop* in the percentage belted. According to NHTSA (as cited by Eby et al., 2002), this occurred when the constitutionality of the law was challenged leading to a total cessation of enforcement, primary and secondary.

In late 1999 and early 2000 three States changed their laws from secondary to primary; Alabama in December 1999, Michigan in March 2000, and New Jersey in May 2000. Alabama’s law allowed for a \$25 fine and exempted vehicles designed for more than 10 passengers and vehicles built before 1965. Michigan also imposed a \$25 fine and exempted taxis and all buses. New Jersey opted for a \$42 fine and did not exempt any vehicles. The laws for all three States applied only to front-seat occupants (noting that separate laws govern minors in any seat position). Chaudhary and others (under review) reports that these laws not only increased seat belt use among fatally injured front-seat occupants of motor vehicles but also decreased the number of fatalities.

**B. Day Versus Night Seat Belt Use**

Research using National Highway Traffic Safety Administration’s Fatality Analysis Reporting System (FARS), indicates that seat belt use among fatally injured front-seat occupants of passenger vehicles declines across the hours of night (Chaudhary & Preusser, 2006). Figure 1 shows this effect using 2006 FARS data.

Figure 1. Percent belt use among fatally injured occupants of passenger vehicles by hour



Source: FARS 2006

In 1984, New York State introduced the first U.S. seat belt law (it allowed for primary enforcement). The belt use rate in New York rose from a mere 15% to 50% following the law. However, its fatality rate dropped only 9%. Given the effectiveness of the seat belt in reducing fatal injuries, thisage was expected to be greater.

Similar effects were seen with other States as they passed belt use laws – belt use increased but fatalities did not drop as much as expected. One explanation was that the drivers who were buckling up were drivers who were already relatively safe drivers and the risky drivers, more likely to be involved in a crash, remained unrestrained. Thus, those most in need of seat belts were least likely to buckle up. Preusser and others (1986) showed support for this contention. In their study, researchers went to bars in New York State several months after the New York seat belt law went into effect. Seat belt observations occurring on roadways near taverns showed that 43% of drivers during the day were belted but that observed belt use dropped to 36% at night, at the same location. Furthermore, drivers most likely to be drinking (and therefore constituted a higher risk) had even lower belt use. Indeed, drivers arriving or leaving bar parking lots at night had a 24% belt use rate.

This research showed that belt use at night was lower than belt use during the day. Similarly, night time fatalities are disproportionately high. Specifically, about 26% of all motor vehicle fatalities occurred between 10 p.m. and 3:59 a.m. according to FARS 2007; this time period represents 25% of a day but there is likely less than 15% of the traffic volume during this time (Hallenbeck, 1997). The question of what happens to the high-risk night drivers' belt use following a change to a seat belt law (or a stricter seat belt law) remains unanswered. Typical statewide seat belt use rates have been based on daytime observations only. Thus the measured increase in seat belt use, as measured by a statewide survey, following implementation of a seat belt law (or law upgrade) cannot answer this question.

Chaudhary and Preusser (2006) conducted the first statewide study to measure seat belt use at night. This was done by drawing a random stratified sampling plan compliant with Federal Register 157 Guidelines for a daytime statewide survey of seat belt usage. This Connecticut statewide survey had observations occurring at the same locations during both day and night. Nighttime observation procedures were similar to the daytime observation procedures, to the extent possible. When needed, night vision technology was used to allow observations to occur in not only well-lit locations but also non-lit locations. The results showed that belt use in daytime hours (83%) was higher than during nighttime hours (77%). Another study (Solomon, Chaudhary, & Preusser, 2007) showed a similar day-to-night difference in New Mexico, using similar observation techniques and New Mexico's daytime statewide seat belt use site locations. This study showed that nighttime seat belt use was 6.2 percentage points lower than daytime seat belt use.

Little work has been done looking at the effects of a primary law upgrade on nighttime seat belt use. Eby and others (2002) show some evidence that high-risk drivers were more affected by the upgrade in Michigan as belt use increased more among those drivers traditionally considered higher risk (e.g., pickup truck drivers). Lange and Voas (1998) measured nighttime belt use before and after California's law upgrade and showed a great increase in night belt use but the authors admit a flaw in the design may have contributed to the effect. Recently, Masten (2007) studied the role of primary law upgrade on nighttime seat belt use using FARS. He reported that all but 1 of the 6 States to change their law showed increase in usage among fatally injured occupants. In several States that increase was greater at night than during the day.

### C. Effects of Enforcement on Nighttime Seat Belt Use

Several studies have shown that enforcement of belt use at night can increase nighttime seat belt use. Binghamton, New York, conducted a combined seat belt and alcohol enforcement campaign with much of the enforcement occurring at night (Wells et al. 1992). The mobilization included combined seat belt and DWI checkpoints. Seat belt use was measured during the day and at night, and results showed that seat belt use at night rose from 35% to 49% over the course of the campaign.

Chaudhary, Alonge, and Preusser (2005) showed that night enforcement alone can effectively increase seat belt use at night. Day and night seat belt observations were conducted before and after a night belt enforcement campaign in Reading, Pennsylvania. Daytime observations occurred from 9 a.m. until 3:59 p.m.; night observations took place from 9 p.m. until 3:59 a.m.. The Reading program was successful despite the lack of paid media and the fact the Pennsylvania is a secondary belt use enforcement State. Night belt use increased by 6 percentage points; day belt use increased by 3 percentage points. A slight (not significant) decrease in belt use was seen in Bethlehem (a comparison location) during the daytime; no difference was observed at night.

Other studies have explored the effects of *daytime* enforcement on nighttime seat belt use. Lund, Stuster, and Fleming (1989) studied the effect of a daytime high visibility enforcement campaign on belt use during the day and at night in a community in California. Chaudhary and Preusser (2006) showed that the Connecticut CIOT program had a larger effect on nighttime seat belt use than daytime. Conversely, Vivoda and others (2006) showed that the daytime CIOT effort in Indiana raised daytime belt use, but that there was a significant decrease in nighttime usage from before to after the program. It should be noted that the program in Connecticut, coincidentally, included television commercials depicting police officers issuing tickets to motorists at night. All in all, results on the effect of daytime enforcement on nighttime belt use are mixed.

A primary belt law in Maine went into effect September 20, 2007, with an educational grace period to April 1, 2008. The current study evaluated seat belt use, public awareness, and police attitude regarding the law before and after the enforcement of the law and immediately following Maine's CIOT mobilization.

## **II. Methods**

### **A. Attitude and Awareness Surveys**

Surveys were conducted by eight Bureau of Motor Vehicle (BMV) offices throughout Maine. Questions were designed to measure public awareness and perceptions of the new law, its penalties, and enforcement. Surveys were conducted before and immediately after a media campaign designed to raise awareness of Maine's primary seat belt law. Radio ads about seat belt use received air play in many parts of the State. In addition, many police departments conducted and coordinated a highly visible enforcement campaign. Pre-media surveys were conducted between February 25 and February 29, 2008, and post media/enforcement surveys were conducted from April 28 to May 2 and from May 30 to June 5, 2008 (after the Nationwide *Click It or Ticket* campaign).

Weekly average BMV transactions versus licensing transactions were obtained for each BMV office. Projection numbers were then calculated for each office including the number of surveys to be completed. Each person completing a survey was required to be a driver licensed in Maine. While people were waiting to be called at a station, they were approached and asked if they held a valid Maine license. Once qualified, they were asked to complete the anonymous survey.

### **B. Seat Belt Observations**

PRG and the University of Southern Maine sent field observers to 40 sites in 10 counties in the State. These sites had been observed in previous statewide CIOT efforts, and site and county selection followed the NHTSA guidelines regarding sample selection. Under these guidelines, selected sites must represent 85% of the State's population. In Maine, that required sampling from the 10 counties with the highest population. Both pre-April 1 enforcement and post-April 1 enforcement observations included these 40 sites.

Site information including county name, city/town/area identifier, exact roadway location, date, day of week, time, weather condition, and direction of traffic flow and lanes was documented. Each one-page data collection form had space to record information on 70 vehicles, the drivers of those vehicles, and the outboard front-seat passengers, if any.

Preusser Research Group trained the observers following the instructions shown in Appendix A. Observers were trained to observe proper shoulder belt use (versus improper or no use) of the driver and, if present, a right front-seat passenger. Observations were made for private passenger vehicles only. These were the same methods used in Maine in previous years and in numerous other seat belt observation efforts. The training involved written material, oral presentation, and field practice. The field practice was conducted in South Portland. The practice observations were crucial for proper training. Results were reviewed and analyzed for accuracy and consistency; no observations were allowed to begin until the practice observations met training standards.

Observers were given descriptions of the road segment and the direction of traffic to be observed. Based on that information, they then selected the most appropriate spot from which to observe the assigned road segment. Observers were instructed to only include vehicles that had actually passed through the first identifier in the description. Observations were conducted from a single point on each segment. Many roads had two or more lanes of traffic. In such situations, the observation period (45 minutes) was divided by the number of lanes, each lane being observed for the proportional length of time. For example, a road with three lanes would require that each lane be observed for 15 minutes.

Observations were made for 45 minutes on a structured schedule of observation times and days. The schedule was designed to maximize the opportunity to study variations in restraint use by time of day and by day of week (e.g., day/night, weekday/weekend). All observations were done during both daylight and nighttime hours. Daytime observation assignments were made across a schedule of time slots that began at 7 a.m. and ended at 5:45 p.m. Nighttime observation assignments were made across a schedule beginning at 9 p.m. and ending at 4 a.m. Road segments were randomly assigned to a day and time for observations, although consideration had to be given for trips to locations that required lengthy travel times. Each day and time had an equal probability of selection. Observations were done on the same day and time as previous year's statewide CIOT observations. For those few that were done on a different day or time (due to weather, schedules, etc.), observations were done at comparable times. For instance, a site that was observed in 2006 on Tuesday morning could be done this year on Wednesday or Thursday morning, but not on Saturday morning, because travel patterns may be different on the weekend. Night belt observations were observed based on weekday (Sunday night-Thursday night) and weekend (Friday and Saturday night) schedules.

Pre-April 1 enforcement daytime observations were conducted starting Monday, February 25, through Saturday, March 8. Pre-April 1 enforcement nighttime observations were conducted from Tuesday, February 24, to Saturday, March 1. Post-April 1 enforcement daytime observations were performed from Saturday, April 26, to Saturday, May 10; post-April 1 enforcement nighttime observations were done from Friday, April 25, to Saturday, May 3. The post-CIOT observations started on May 30.

When needed, military-grade night vision goggles and 1 million candle-strength handheld infrared lights were used to observe nighttime belt use. Two staff members were needed for these observations. One staff member (observer) would observe belt use through the night vision goggles while shining the infrared light at the vehicle. This person would also call out the data while the other staff member (recorder) would write down information on the observation data sheet.

### **C. Law Enforcement Focus Groups**

Representatives from six law enforcement agencies were interviewed between February 27 and February 29, 2008. The interviews were conducted near the end of the transitional period leading to full implementation of Maine's new standard enforcement seat belt law. Only secondary enforcement of the adult seat belt law was permitted until September 2007. Since that

time, primary stops for adult seat belt violations were permitted, but only warnings could be issued until April 1, 2008.

Brewer Police Department has 22 sworn officers, 20 of whom are full time. The department chief and one patrol officer were interviewed. The agency patrols the city of Brewer, a city of approximately 9,300 adjacent to Bangor. The city covers an area of approximately 30 square miles. The agency does not have a separate traffic unit, but all officers do some traffic patrol, and traffic enforcement is the major duty of 15 officers. The department issues an average of 2,000 traffic citations annually. The city has a policy requiring all employees to wear seat belts while driving city vehicles and all law enforcement officers comply with the policy.

Waterville Police Department patrols the 13 square miles of the city of Waterville, which has a population of approximately 15,000 to 16,000 residents. The two local colleges, Colby and Thomas, have approximately 3,000 and 2,000 students, respectively. The deputy chief and one patrol officer were interviewed. The department has 16 patrol officers who cover three shifts. There is no separate traffic unit. The deputy chief recalled that the department issued 484 traffic citations in 2007. The department has a seat belt policy that has been in effect for over 13 years. Compliance is near 100%.

Augusta Police Department has 41 sworn officers. One sergeant and one patrol officer were interviewed. The agency patrols the city of Augusta, which is the State capital. Other agencies patrolling in Augusta are the State Police and the Sheriff's Office. There is no traffic unit. On any particular shift, a minimum of three officers work traffic patrols. In 2007, the department issued 2,045 traffic summonses and 4,366 traffic warnings. The department has a seat belt policy that is observed by officers.

Maine State Police, Troop G, patrols the Maine Turnpike (I-95) from Kittery to Augusta, totaling 108 miles of roadway. The lieutenant in command and a corporal were interviewed. There are 35 sworn officers. Traffic patrol is the primary function of Troop G and it wrote close to 25,000 traffic summonses last year. Passenger restraint summonses and warnings, including child restraints, totaled 1,921 in 2007. The State Police have a mandatory seat belt use policy and it is observed.

Biddeford Police Department has 45 sworn law enforcement officers. The patrol area is the City of Biddeford with a population of about 22,000. The sergeant supervising traffic enforcement spoke for the department, along with a full time traffic officer. For the year 2007, the department issued 1,897 seat belt citations, about 1,700 of which were issued by the two patrol officers who spend 100% of their time on traffic enforcement. Other patrol officers do some traffic enforcement, perhaps two hours per shift. The agency has a policy of citing every seat belt violation. The only circumstance in which it would issue a warning is if the belt is worn improperly (i.e., under the arm).

York Police Department was represented by a lieutenant, a sergeant, and one patrolman. The department patrols the town of York, which is comprised of four municipalities and covers 53 square miles. The official population is around 18,000, but at the height of tourist season, the population swells to nearly 60,000. There are 28 sworn officers in the department and no traffic

unit as such. The interviewed sergeant indicated that all officers do some traffic patrol and most are very traffic-oriented. Traffic patrol is a major component of the department's crime prevention strategy. In 2007, a total of 561 traffic summonses were issued, including 81 seat belt citations. In addition, 109 seat belt warnings were issued.



### III. Results

#### A. Awareness and Attitude Surveys

Attitude and awareness surveys were conducted by the Maine Bureau of Motor Vehicles (BMV). The one-page questionnaire was used to gather basic demographic information (e.g., gender, age), driving habits (e.g., miles driven, type of vehicle driven), seat belt use (e.g., frequency of use, change in frequency of use), knowledge of seat belt law, perception of enforcement severity, and awareness of recent belt law and belt enforcement messages. Data was collected at 8 different BMV offices across the State: Augusta, Bangor, Ellsworth, Kennebunk, Mexico, Portland, South Portland, and Rockland, and across three waves. The first wave of data was collected after the law came into effect but when only warnings were being issued (February 26 to March 1, 2008), the second wave was conducted between April 25 and May 4, 2008, once enforcement went into full effect, and the third wave was carried out between May 30 and June 5, 2008, right after the national *Click It or Ticket* mobilization.

There were a total of 989 participants in Wave 1, 1,491 in Wave 2, and 1,398 participants in Wave 3. Due to a clerical error, two different versions of the survey were distributed in Wave 3. The original survey (Appendix B) was collected in the BMV offices in Augusta, Bangor, Mexico, and Rockland. The alternate survey was erroneously used in Ellsworth, Kennebunk, Portland, and South Portland. Differences between the two surveys were minor and are discussed in Appendix B.

##### 1. Demographics

We compared the age and sex distribution of survey respondents to the corresponding demographics of the State in terms of drivers (as per FHWA 2006). The age categories provided by FHWA did not match those used in the survey so only the percentages for matching ages are included. Across all waves, male participants represented 52% of the sample and 48% were female, compared to 49.5% male and 51.5% female drivers in the State. Overall, 8% of those surveyed were under 21 years old (8% for the State), 11% were between 21 and 25, 25% were between 26 and 39, 22% were between 40 and 49 (21% for the State), 17% were between 50 and 59 (20% for the State), and 16% were 60 or older (23% for the State<sup>1</sup>). Approximately 57% of respondents reported driving at least 10,000 miles a year and 51% reported passenger cars as their primary vehicles. Chi-square analyses were used to compare responses across all three waves: Wave 1 vs. Wave 2, Wave 1 vs. Wave 3, and Wave 2 vs. Wave 3. Significance level was set at  $p < .01$ .

##### 2. Belt Use

Respondents were asked how often they wore their seat belts while driving or riding in passenger vehicles. In Wave 1, 70% reported *always* wearing their seat belts compared to 71% in

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<sup>1</sup> Ages 70 and older are estimated by FHWA. This estimation may account for the disparity in percentages between FHWA's values and the survey's values.

Wave 2 and 72% in Wave 3. Overall, self-reported seat belt use remained stable across all three waves with an average of 71% of respondents reporting always wearing their seat belts (Figure 1). When asked to report on changes in seat belt use, an average of 37% reported wearing their belts *more often* or *much more often* now than in previous years (Figure 2). This proportion was similar across all three waves (37% in Wave 1, 37% in Wave 2, and 38% in Wave 3).

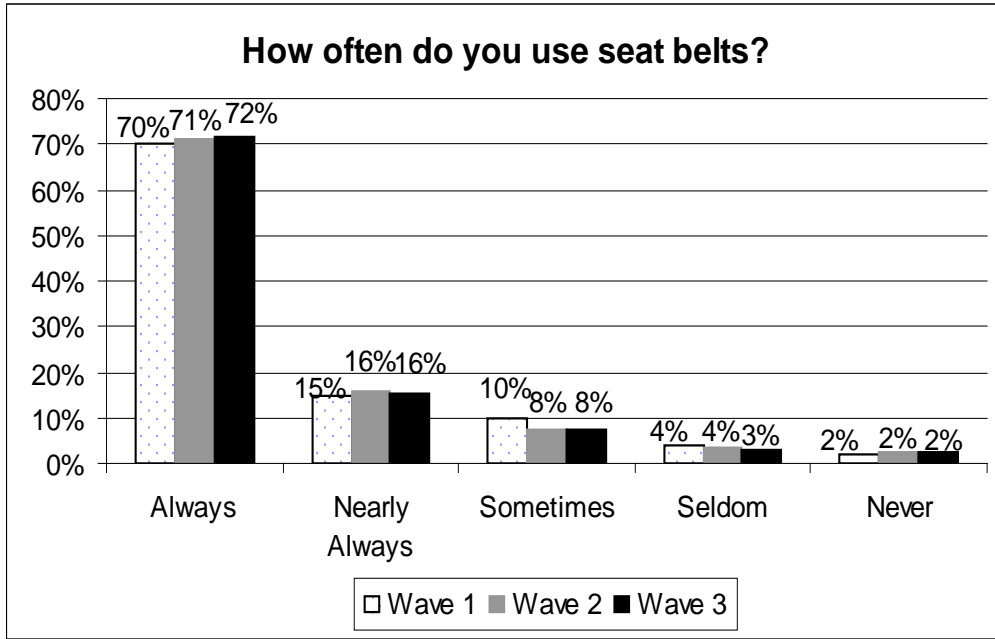


Figure 1. Self-Reported Belt Use

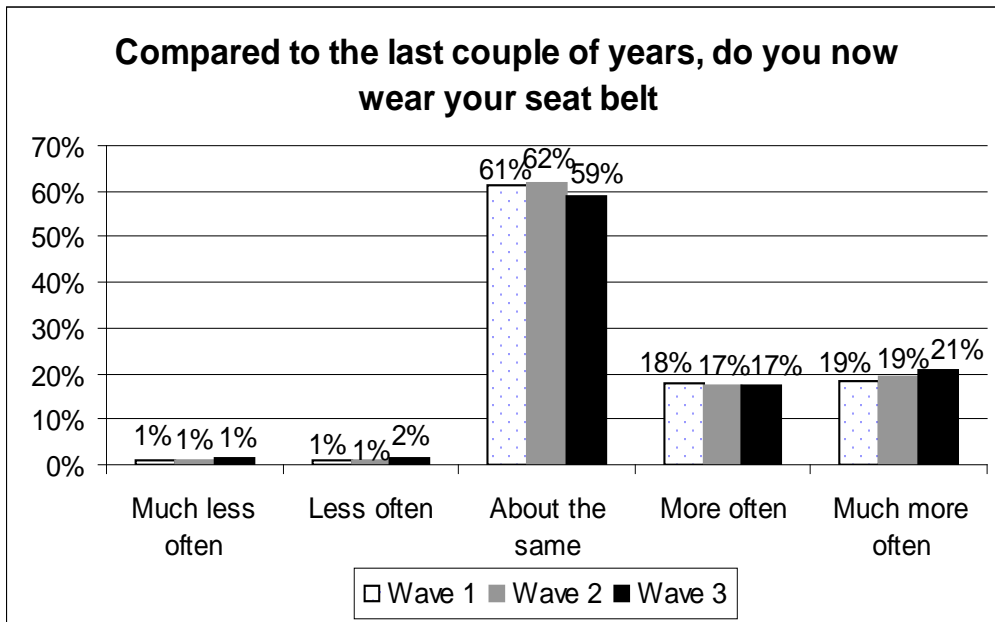
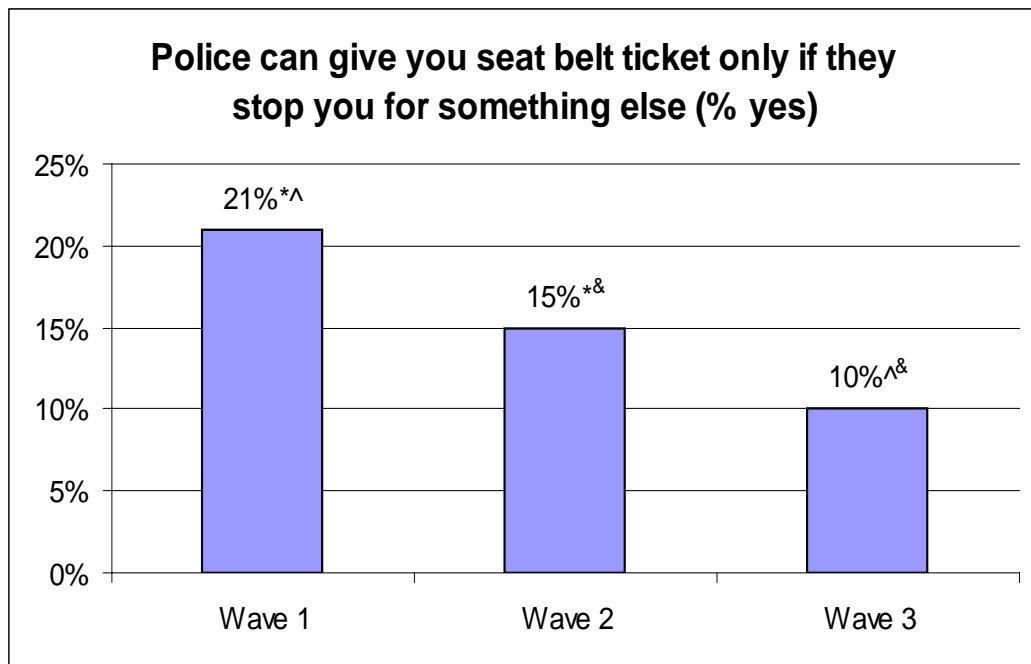


Figure 2. Change in Frequency of Belt Use

### 3. Knowledge of Belt Law and Enforcement

Respondents were asked to identify which statements were true regarding enforcement of seat belt use. In Wave 1, 14% believed that law enforcement could only give a warning for non-use. This proportion showed a significant decrease in Wave 2 (10%,  $p < .01$ ) and a marginally significant drop from Wave 1 to Wave 3 (10%,  $p < .05$ ). In Wave 1, 21% of respondents selected the statement *Police can give you a seat belt ticket only if they stop you for something else*. This proportion dropped significantly in Wave 2 (15%) and Wave 3 (10% with  $p < .0001$  in both cases, see Figure 3).

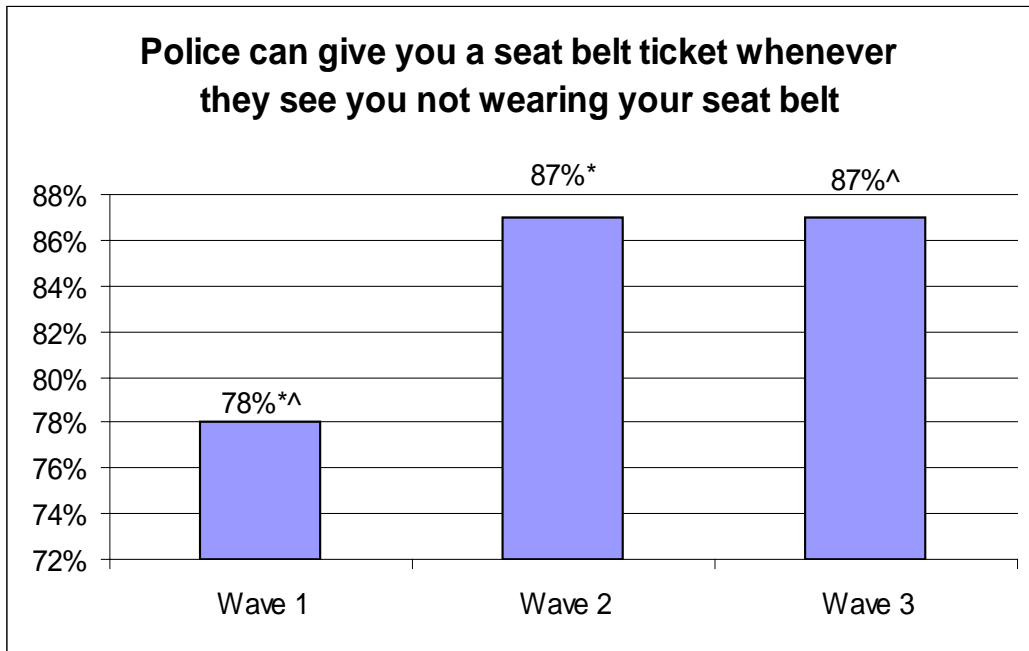


Note: Data sharing superscripts are significantly different,  $p < .01$ .

Figure 3. Knowledge of Belt Law – Ticket if Other Offense

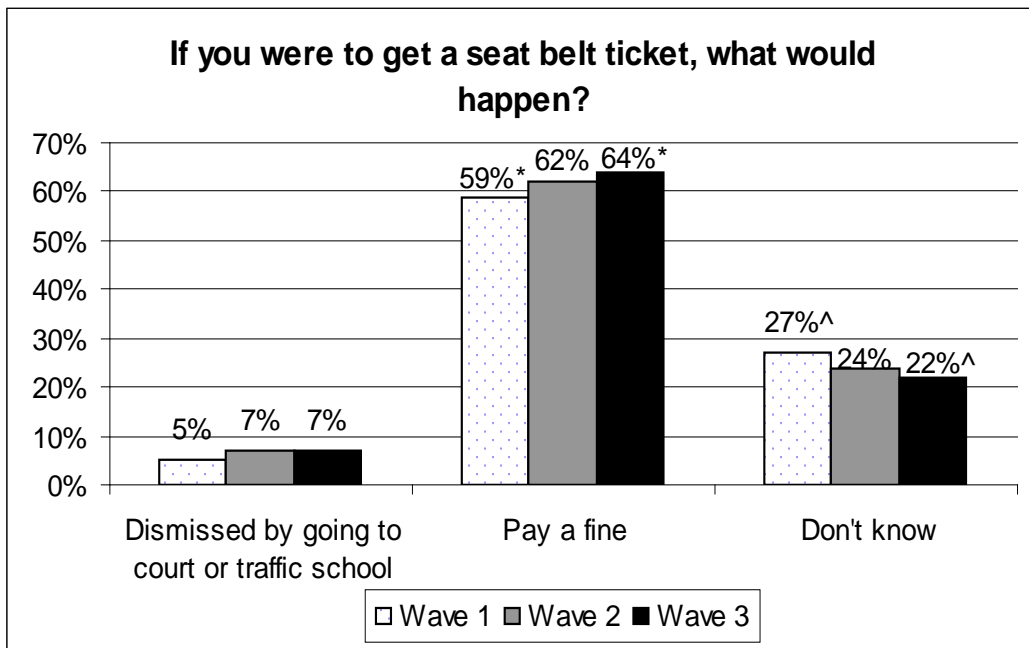
The statement *Police can give you a seat belt ticket only if there has been an accident* was not a popular choice and was selected by less than 4% of respondents and it showed no significant changes across waves. The final statement – *Police can give you a seat belt ticket whenever they see you not wearing your seat belt* – was selected by close to 85% of respondents and showed significant increases from Wave 1 to Wave 2 ( $p < .0001$ ) and from Wave 1 to Wave 3 ( $p < .0001$ , see Figure 4 for details).

Respondents were also asked what would happen if they were to get a seat belt ticket. A small percentage (6%) believed that the ticket could be dismissed by going to court or traffic school. There were no changes across waves (Wave 1, 5%; Wave 2, and Wave 3, 7%). A majority (62%) believed that they would have to pay a fine. The proportion of respondents selecting this option increased significantly from Wave 1 to Wave 3 (from 59% to 64%,  $p < .01$ ). Finally, 24% of respondents indicated they did not know what would happen were they to get a seat belt ticket. The proportion responding *don't know* decreased significantly from Wave 1 to Wave 3 (27% to 22%,  $p < .01$ ). Figure 5 shows the details for this series of items.



Note: Data sharing superscripts are significantly different,  $p < .01$ .

Figure 4. Knowledge of Belt Law – Ticket Whenever Not Belted

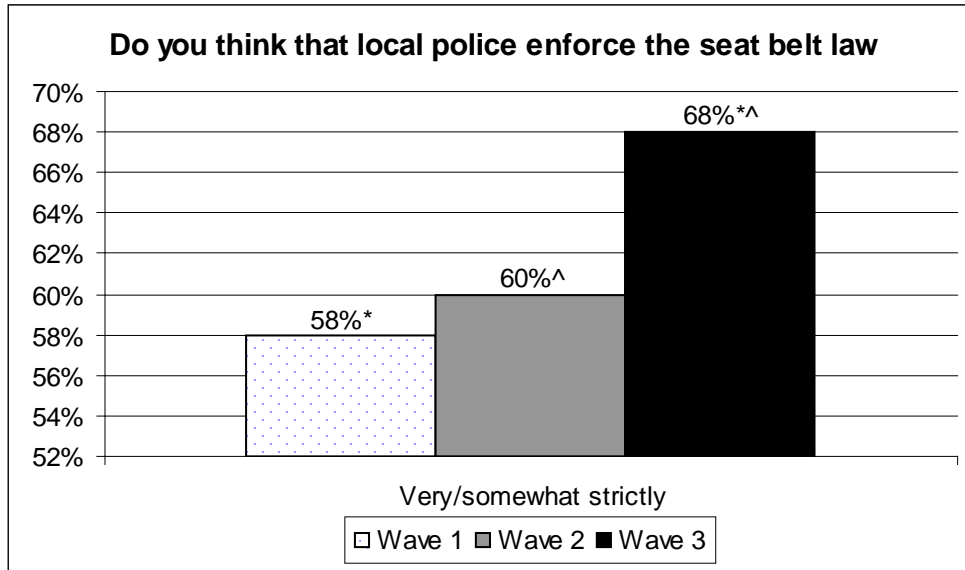


Note: Data sharing superscripts are significantly different,  $p < .01$ .

Figure 5. What Happens if Get Ticket

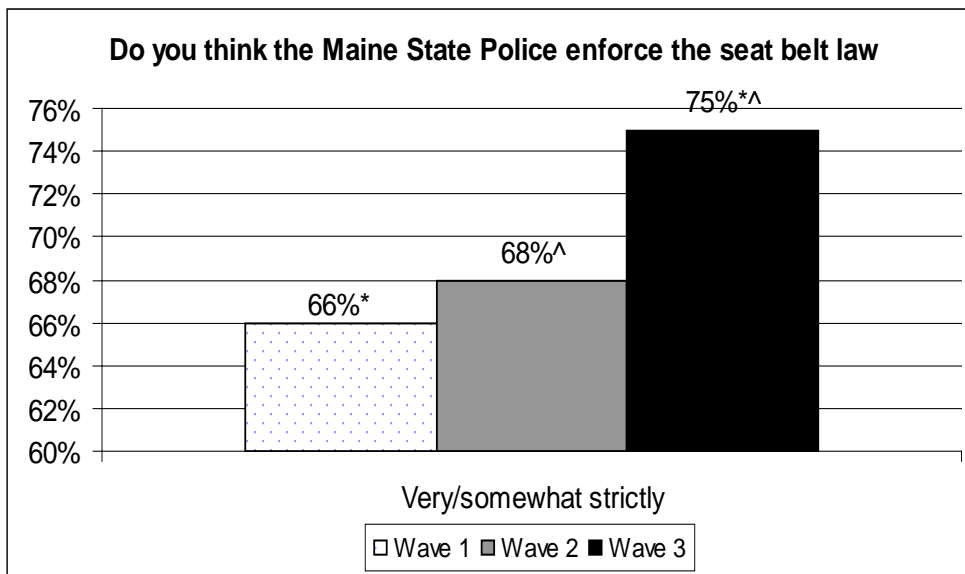
#### 4. Perception of Enforcement Certainty

When asked to judge the certainty of enforcement by *ocal* police, increases were observed for each wave. Significant changes were observed from Wave 1 to Wave 3 ( $p < .0001$ ) and from Wave 2 to Wave 3 ( $p < .0001$ , see Figure 6). There was also a significant increase in perception of certainty of enforcement of *State* police from Wave 1 to Wave 3 ( $p < .0001$ ) and from Wave 2 to Wave 3 ( $p < .001$ , Figure 7). Thus, perception of enforcement certainty, both at the local and State levels, increased as actual enforcement increased.



Note: Data sharing superscripts are significantly different,  $p < .01$

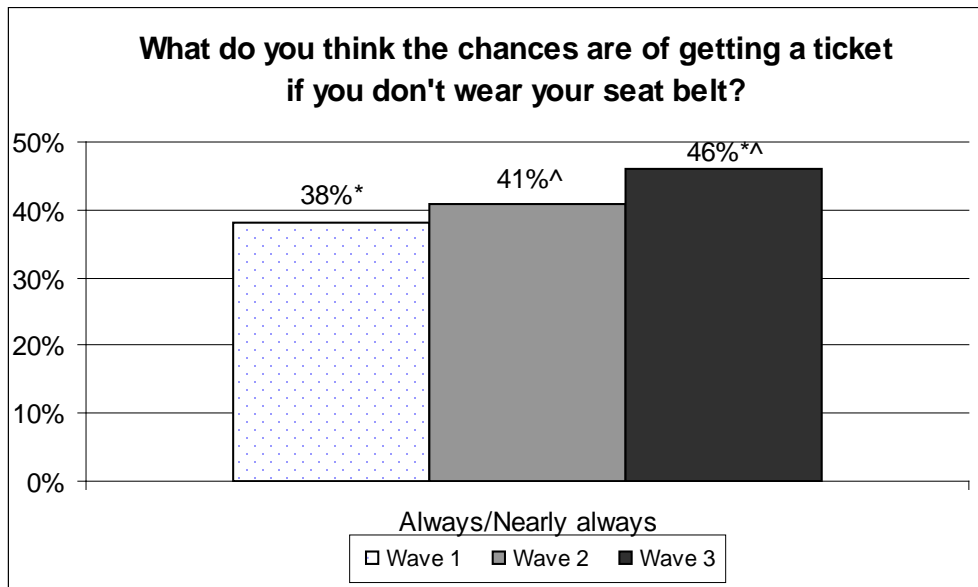
Figure 6. Severity of Enforcement by Local Police



Note: Data sharing superscripts are significantly different,  $p < .01$

Figure 7. Severity of Enforcement by State Police

When asked about the likelihood of getting a ticket for non-use, there was a progressive increase in proportion of respondents selecting *always* or *nearly always*. Increases were significant from Wave 1 to Wave 3 ( $p<.0001$ ) and from Wave 2 to Wave 3 ( $p<.01$  – see Figure 8).



Note: Data sharing superscripts are significantly different,  $p<.01$

Figure 8. Chances of Getting a Ticket for Non-Use

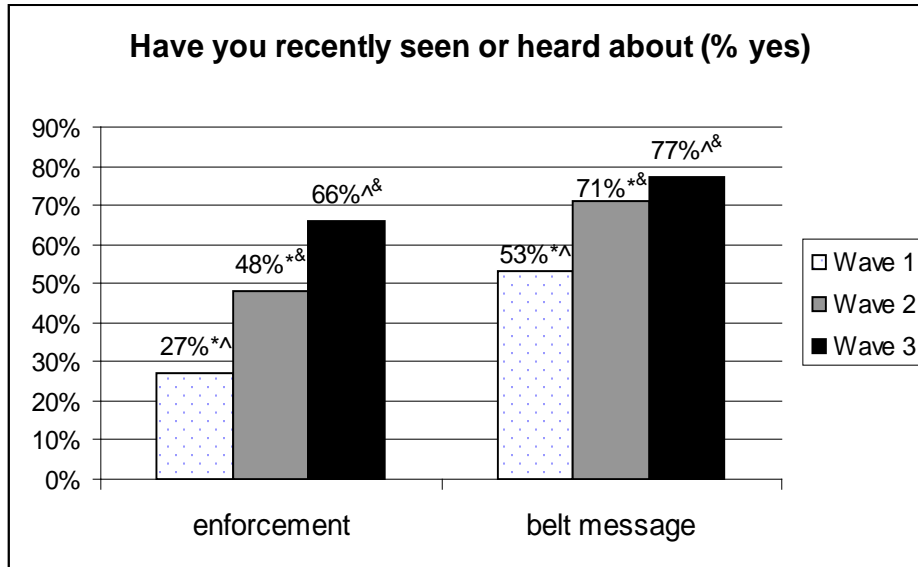
### 5. Awareness of Enforcement and Belt Messages

Respondents were asked a series of questions inquiring about their awareness of messages announcing enforcement and experience with actual enforcement. The first item asked if respondents had recently seen or heard about extra belt enforcement by law enforcement. Each wave showed a progressively higher proportion of respondents reporting awareness of such a message. In Wave 1, 24% indicated having heard this message. The percentage increased to 48% in Wave 2, and higher still in Wave 3 (66%). Differences between each wave were significant ( $p<.0001$ ). When asked if they had experienced enforcement, percentages also increased across each wave, showing significant increases between Waves 2 and 3 and between Wave 1 and 2 (both at  $p<.0001$ ). The change from Wave 1 to Wave 2 was marginally significant ( $p=.019$ ).

Maine motorists were also asked if they had read, seen, or heard anything about seat belts in their State. As was the case with enforcement awareness, large, significant increases were observed between all three waves ( $p<.0001$ ), going from a low of 53% in Wave 1 to a high of 77% in Wave 3. It thus seems quite clear that the media campaign was very successful, reaching more than 75% of the sample. Figure 9 shows the results of the two awareness items (enforcement and belt messages). Respondents who reported being aware of the seat belt message were also asked *where* they had read, seen, or heard that message. TV was the most popular answer, with 58% of respondents indicating it as the source of the message, but it showed no change across Waves (62%, 57%, and 58% in Waves 1, 2, and 3, respectively). Radio and newspaper were quite popular answers as well, and did show changes across waves. Radio showed a significant increase between Wave 1 and Wave 3 (36% to 45%,  $p<.001$ ), and between

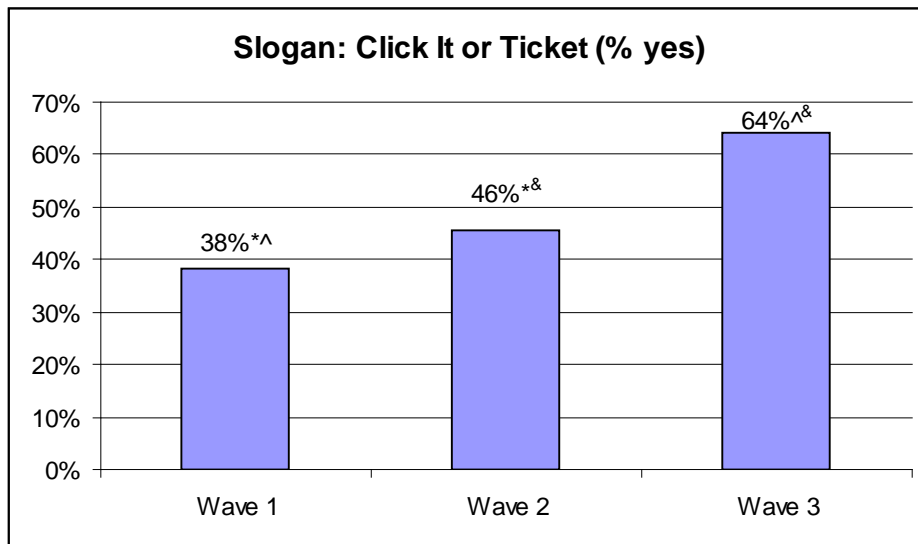
Wave 2 and Wave 3 (36% to 45%,  $p < .0001$ ). Newspaper showed a significant increase from Wave 1 to Wave 2 (35% to 45%,  $p < .0001$ ) and a near-significant decrease from Wave 2 to Wave 3 (45% to 40%,  $p = .011$ ).

As a final set of questions, respondents were asked to pick which slogans were associated with the belt message. Choices were: *Click It or Ticket*; *You Drink, You Drive, You Lose*; *Buckle Up Maine*, and *55 Alive*. There was a clear increase in the percentage of respondents saying they had heard of *Click It or Ticket*. Figure 10 shows that recognition increased significantly between each of the three waves.



Note: Data sharing superscripts are significantly different,  $p < .01$

Figure 9. Awareness of Enforcement Belt Messages



Note: Data sharing superscripts are significantly different,  $p < .05$

Figure 10. Slogan Recognition (% yes)

## B. Observed Belt Use Surveys

Sites having less than 5 observations in each of the three waves were excluded. This left all 40 daytime sites and 27 nighttime sites. All 40 day sites were used for analyses of daylight belt use. Only the 27 sites were used for night and night versus day analyses. Because the night observations were essentially a subset of the day observations, the time periods were analyzed separately unless otherwise specified. Data points consisted of the percentage of belted at each site (i.e., each site had equal weight). Actual N was maintained after weighting. There were 27,063 total observations; 23,049 during the day and 4,014 at night (See Table 1). A binary logistic regression was conducted to analyze differences. Alpha was set to .01 to account for the many regression analyses run on the data.

Table 1. Number of Observations, by Wave

	All Sites			27 Sites		
	Day	Night	Total	Day	Night	Total
Wave 1	7,115	1,028	8,143	4,803	1,000	5,803
Wave 2	8,055	1,467	9,522	5,437	1,192	6,629
Wave 3	7,879	1,519	9,398	5,318	1,268	6,586
Total	23,049	4,014	27,063	15,558	3,460	19,018

The regression produced a significant effect for daytime belt use (Table 2). Daytime belt use showed an increase from 76.9% in Wave 1 (pre-enforcement) to 79.2% in Wave 2 (post-enforcement, see Figure 11). Both of these rates were significantly less than the Wave 3 rate (post-*Click It or Ticket*) of 83.8%. A separate regression, excluding Wave 3, determined that the increase from Wave 1 to Wave 2 was also significant. The regression on nighttime belt use showed similar results. Belt use at night during Wave 3 (81.2%) was significantly higher than belt use at night in Wave 1 (69.3%) and Wave 2 (76.9%). Wave 2 was also significantly greater than Wave 1.

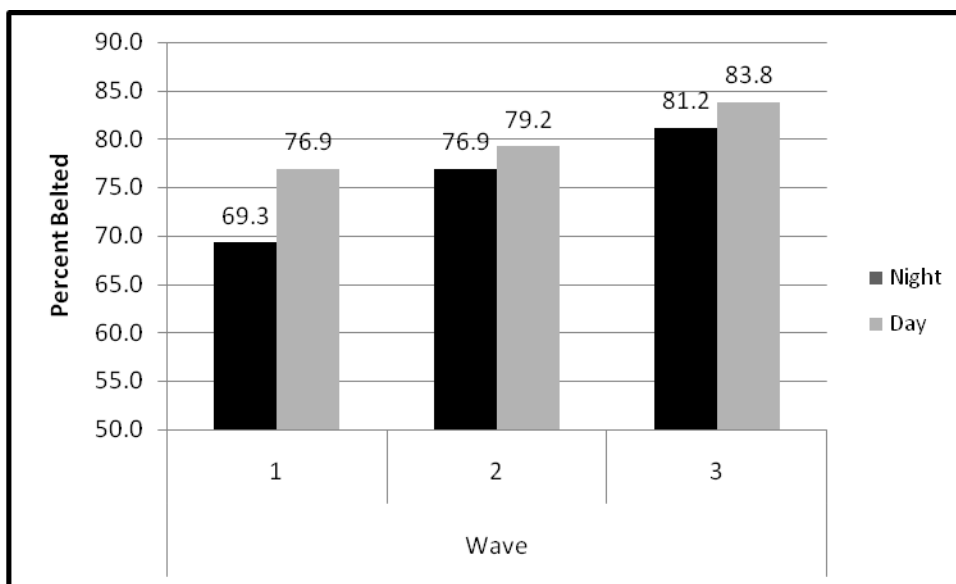


Figure 11. Seat Belt Use Rates by Wave and Time of Day



The influence of primary enforcement on belt use appears to be less pronounced in daytime belt use than in night time belt use. In order to statistically test this, another regression was run using only the 27 sites used in the nighttime analyses (see Table 3). This regression included day versus night and wave as a factor as well as the interaction between time and wave. The interaction term for this regression was significant but only using traditional levels of alpha ( $p=.05$ ). The results of this regression suggest that there was a slightly greater influence of allowing primary enforcement on night belt use than on day belt use but that the impact of the CIOT mobilization was not differential by time of day.<sup>2</sup> This regression also confirmed an overall increase in belt use across waves and indicated that day belt use was significantly higher than night belt use.

Table 2. Binary Logistic Regressions: Main Effect/Simple Differences of Wave

Time	Comparison	df	Sig.	Odds Ratio	99% C.I.	
					Lower	Upper
Day	Overall	2	0.000			
	Wave 1 v. Wave 3	1	0.000	1.55	1.39	1.73
	Wave 2 v. Wave 3	1	0.000	1.36	1.22	1.51
Night	Overall	2	0.000			
	Wave 1 v. Wave 3	1	0.000	1.90	1.47	2.46
	Wave 2 v. Wave 3	1	0.011	1.29	1.00	1.67

Day	Wave 1 v. Wave 2	1	0.001	1.14	1.03	1.26
Night	Wave 1 v. Wave 2	1	0.000	1.48	1.15	1.90

Table 3. Binary Logistic Regression: Interaction of Wave and Time of Day

Level of Analysis	Comparison	df	Sig.	Odds Ratio	99% C.I.	
					Lower	Upper
Main Effects	Overall Wave	2	0.00			
	Wave 1 v. Wave 3	1	0.00	1.90	1.474	2.458
	Wave 2 v. Wave 3	1	0.01	1.29	0.998	1.666
	Overall Day v. Night	1	0.01	0.80	0.648	0.985
Interaction Terms	Overall	2	0.04			
	Wave 1/day v. Wave 3/night	1	0.04	0.80	0.597	1.061
	Wave2/day v. Wave 3/night	1	0.84	1.02	0.767	1.363

Additional analyses were run on raw (unweighted) data to establish seat belt use rates for certain demographics during day and night across waves. For these analyses all observations were included (including data from sites with fewer than 5 observations). We examined belt use change across all three waves by: day of week (weekend, weekday), population density (rural, urban), road type (highway, local), vehicle type (car, SUV, pickup truck, and van), sex, and person type (driver, passenger). Almost all subsets increased significantly from Wave 1 to Wave

<sup>2</sup> A regression excluding Wave 1 showed a non-significant interaction between time of day and wave.

3 (as per chi square test). Only pickups at night failed to increase (vans during the day increased at a  $p = .02$  level). Table 4 shows the percentage belt use and overall chi square for each category.

Table 4. % Belt Use by Wave, Category and Time of Day

Time	Variable	Wave			$\chi^2$	p
		1	2	3		
Daytime	Weekday	79.8%	82.8%	86.4%	96.01	0.000
	Weekend	74.9%	78.3%	84.7%	44.88	0.000
Nighttime	Weekday	68.1%	79.6%	81.0%	47.46	0.000
	Weekend	69.6%	83.1%	89.0%	27.11	0.000
Daytime	Rural	78.9%	81.8%	85.6%	52.02	0.000
	Urban	78.9%	82.2%	86.4%	76.67	0.000
Nighttime	Rural	70.0%	79.7%	79.9%	20.39	0.000
	Urban	67.3%	80.5%	84.0%	53.09	0.000
Daytime	Highway	88.4%	86.8%	91.3%	24.87	0.000
	Local	75.3%	80.1%	83.7%	115.82	0.000
Nighttime	Highway	65.0%	80.1%	79.8%	10.42	0.005
	Local	69.0%	80.2%	82.2%	59.74	0.000
Daytime	Car	82.1%	85.9%	87.4%	52.92	0.000
	Pick-Up	65.6%	67.6%	75.3%	30.91	0.000
	SUV	78.9%	79.6%	89.5%	59.46	0.000
	Van	83.3%	84.8%	88.5%	7.70	0.021
Nighttime	Car	70.2%	80.3%	81.6%	30.80	0.000
	Pick-Up	58.3%	64.8%	68.1%	4.39	0.111
	SUV	76.3%	88.2%	91.1%	20.84	0.000
	Van	66.7%	87.5%	82.8%	11.55	0.003
Daytime	Male	75.2%	77.8%	83.2%	80.06	0.000
	Female	83.6%	87.1%	89.3%	49.67	0.000
Nighttime	Male	63.2%	77.1%	79.6%	56.02	0.000
	Female	76.8%	84.1%	84.2%	11.64	0.003
Daytime	Driver	78.7%	82.5%	86.6%	131.01	0.000
	Passenger	79.5%	80.4%	84.2%	12.28	0.002
Nighttime	Driver	68.6%	79.7%	82.1%	56.01	0.000
	Passenger	68.4%	81.9%	80.3%	13.60	0.001

## **IV. Law Enforcement Focus Groups**

### **1. Participation in Seat Belt Enforcement Mobilizations**

All of the agencies, by design, were prior participants in annual seat belt enforcement mobilizations. It should be noted that Troop G of the Maine State Police did not mobilize extra grant-funded patrols for *Click It or Ticket* because their status as contractors to the Maine Turnpike Authority disqualifies them for funding through the Bureau of Highway Safety. All other troops of the State Police do participate in CIOT. Statistics on Troop G seat belt citations and warnings during the mobilization are forwarded to State Police headquarters.

All five local law enforcement department interviewed participated in the 2007 *Click it or Ticket* mobilizations, collectively issuing more than 240 seat belt citations. Four of the five departments also took part in the 2008 CIOT mobilization. The number of seat belt tickets issued in the 2008 mobilization more than doubled the 2007 numbers. More than 490 seat belt citations were issued during the 2008 CIOT campaign, a 104% increase compared to 2007. Individual departments showed increases ranging from 60% to 193%, between 2007 and 2008.

Where possible, the Maine State Police participated in the CIOT campaign in 2007 and 2008. Although results were not readily available, it is believed that the 2008 campaign resulted in many more citations than the 2007 effort.

Maine State Police, Troop G, as noted earlier, does not receive funding for participation in the annual seat belt enforcement campaign. They do, however, participate in a limited way. The troop coordinates its monthly speed enforcement at tollbooths to coincide with the seat belt campaign, writing seat belt citations on all stops where belt violations are observed.

### **2. Routine Enforcement Under the Secondary Law**

Before the primary law became effective, officers made stops for speeding, signal violations, expired permits, and other primary offenses, speed being the most common. Officers report being somewhat uncomfortable writing citations for both the stopping charge and a seat belt violation when the law was secondary. Generally, officers issued verbal warnings for the seat belt violation and cited the stopping charge. In cases where the stopping charges were not flagrant, some officers chose to write only the seat belt violations. Most departments agree that prior to seat belt violations becoming a primary offense, most seat belt citations came out of stops for speeding.

During *Click It or Ticket* patrols, officers often cited both the stopping charge and the seat belt violation. More stops and more seat belt tickets are expected under the primary law.

Under the secondary law, State Troopers usually issued citations for both the seat belt violation and stopping charges. Officers working tollbooth speed enforcement details paid particular attention to seat belts, writing citations for seat belt violations when other violations were present.

### 3. Notification of Changes in Seat Belt Law

Many departments learned about the change in the seat belt law from the New Law Update, a publication put out by the State. Others also heard about the change as part of the routine law updates. Some officials were notified of the law moments after it passed due to their involvement in advocating the change in the seat belt law in the legislature. The Bureau of Highway Safety also made a major effort to publicize the change in the law in the news media when the law passed and again in September, when primary stops were first permitted. A number of departments made a point of notifying their officers about the law change in a role call presentation preceding the September effective date. They felt it was important to make sure that officers understood that they could and should make primary stops for seat belt violations, but could not write citations on primary stops until April 2008. One department also did its own public information campaign involving local media prior to beginning primary stops in September and plan an additional local public information and education effort prior to April 1. One State Police corporal recalls having seen a news broadcast on TV Channel 6 in February that gave a history of the primary law, explaining that the law went into effect in September and that police would begin writing tickets on primary stops on April 1. A few other agencies thought they might have heard or read something about the change to primary in news media, but couldn't remember specifically.

### 4. Enforcement Activity Since Law Changes

None of the agencies received any funding for special seat belt enforcement programs associated with the change in the law. The first funded seat belt mobilization since the primary law went into effect was the May 2008 *Click it or Ticket* mobilization. However, all agencies believe that the level of seat belt enforcement activity on regular patrols increased during the six-month transition when warnings were permitted on primary seat belt stops and since April 2008 when standard enforcement went into effect.

Many believe the level of seat belt enforcement has increased since primary stops were permitted. Most officers are motivated to make as many motorist contacts as possible, whether they result in citations or not, because they consider crime prevention to be their primary mission and any stop aids in the accomplishment of that mission. Reactions were mixed during the transition period, some departments enforcing the seat belt law more aggressively on all traffic patrols during the transition, stopping vehicles and writing warnings in the absence of other violations, at the same time as they increased the number of seat belt tickets written on secondary stops. Some departments did not notice any increases in primary seat belt stops during the transition period.

One department has been making seat belt presentations at the local high school, in driver education classes and assemblies. A special enforcement effort took place in which officers stopped cars and issued warnings to unbuckled drivers and passengers as their vehicles were leaving parking lots. Observations before and after the effort showed that compliance improved from 60% to 90%.

Participants report that seat belt enforcement on regular patrols has increased further since April 1, 2008. Officers welcomed the ability to make primary seat belt stops as an additional tool.

State Police have been making primary seat belt stops and issuing written warnings since the primary law went into effect. Officers were not only writing a lot of warnings from primary stops, but were also writing more seat belt summonses as a secondary offense. Tactics have not necessarily changed, since each trooper has a lot of miles to patrol and needs to keep moving. Moreover, they argue that it is difficult to spot seat belt violations on moving patrols. However, troopers are paying more attention to seat belts every time they conduct tollbooth speed details, where violations are very easy to spot.

#### 5. Changes in Tactics After April 1

Some departments don't expect to change their tactics much but do feel that there will be more citations because of additional offenders who are not breaking any other laws. Other departments plan on putting static patrols in places where seat belt violations are easier to observe, particularly during the May mobilization. In particular, the strategy of using a stationary observer with a speed laser and two officers in patrol cars will be relied on more heavily. Since the violation became primary, the stationary officer can look for belt violations directly, in addition to enforcing speed. Most officers agree that they do better when they spend more time stationary at a place where violations are more easily spotted than when following and passing to determine if belts are being worn.

One department planned a local campaign starting April 1, when permitted to write citations on primary stops. They preceded their local enforcement effort with a public information effort through local news media. They had also placed ads in the local papers preceding the warning campaign beginning in September and used their school resource officer to make presentations to public school students. While the department did not add extra patrols, there was heavy emphasis on seat belts by both traffic and regular patrol officers. Officers reported that parking in a good location to observe violations was more productive for seat belt enforcement than roving patrols.

The State Police again timed their toll booth laser patrols to coincide with *Click It or Ticket* enforcement. They anticipated that more tickets would be written because all seat belt violations that officers observe can be cited, and many officers would prefer to give a seat belt ticket and warn on speed when motorists are not far over the limit. They anticipated that seat belt enforcement activity would be very high on routine toll booth laser details as well, because the details involve a laser spotter ahead of the toll and five or six officers on foot at the toll plaza. They are in an excellent position to observe violations. Troopers have become more vigilant to seat belt violations since April and have dedicated routine patrols to seat belt enforcement of their own volition. Officers send enthusiastic reports about the increased number of contacts that they made.

## 6. Motorist Reaction

Many drivers have learned that the seat belt law is primary, but generally feedback from the public has been pretty discreet. Although they hear the normal amount of grumbling about seat belt use being required, they have heard no complaints about the law turning primary. One of the interviewees noted that there was some organized lobbying against the change to primary enforcement by the United Bikers of Maine. The group views strengthening of seat belt laws as part of the “slippery slope” leading to mandatory helmet laws. In fact, comments have been heard from motorists that the laws are inconsistent in that they require seat belt use but do not require helmets on motorcycle riders. However, they have had no negative feedback about primary enforcement.

Officers generally believe that reactions to the law change have been mild during the transition because warnings don’t cost motorists money, and most expect that seat belt use will increase as standard enforcement is done for a significant period of time.

## 7. Law Enforcement Opinion About Standard Enforcement

Law enforcement officers were generally favorable about the change to standard enforcement. Several expressed the sentiment that it should have always been a standard enforcement law. State Police representatives believe the law change will increase seat belt use, which is particularly important on the high-speed roads they patrol. They note that severity of turnpike accidents has decreased noticeably as belt use has increased. Several local and State agencies noted that the value of allowing stops for seat belt violations goes beyond increasing belt usage. An additional benefit is that it aids law enforcement officers in detecting impaired driving and drug-related crimes.

## V. Discussion

The results of the awareness surveys clearly indicate that Maine motorists were aware of the seat belt law changes in their State. Knowledge about the consequences of the law change were also apparent as indicated by the wave-to-wave decrease in the percentage of respondents indicating that law enforcement could only issue warnings for seat belt violations. More respondents also knew by the end of the CIOT wave that law enforcement could issue a ticket upon observation of the seat belt violation alone. There was also an increase in the perceived certainty of enforcement by both local police and State police. This increase was significant only following the CIOT wave so it is uncertain whether the increase was a function of the change in permissible enforcement combined with CIOT, or the CIOT enforcement alone. Respondents' perceived risk of being ticketed also increased across waves, as did message penetration. The proportion of respondents hearing about enforcement nearly doubled from Wave 1 to Wave 2 and more than tripled by Wave 3. The percentage of respondents having heard a message about belts also greatly increased across waves. Each wave showed an increase in percentage of people having heard the *Click It or Ticket* slogan as well.

Belt use clearly increased in each wave. Daytime belt use did increase following the change in enforcement tactics but increased even further following the high visibility enforcement campaign. Nighttime belt use also increased following the law change and following the high visibility enforcement campaign. However, in contrast to daytime use, nighttime belt use showed a greater increase after the change to primary enforcement than it did after the high visibility enforcement. Consistent with Masten's (2007) FARS interpretations, it appears that the change to primary enforcement affects nighttime seat belt use more than daytime belt use. The results of this study also suggest that (at least in tandem with a primary law upgrade) daytime enforcement can increase nighttime seat belt use.

Law enforcement focus groups indicate that the law enforcement community shows strong support for the change to primary. Officers tend to view the change positively and report actively enforcing the law. They generally believed that motorists were buckling up more frequently following the law change.

The findings of this study suggest that a change from secondary to primary does more than merely raise overall seat belt use or belt use during daylight hours. In fact, it appears to raise belt use more at night when crash risk is much greater. Future research should attempt to clarify this issue further by looking at the effects of primary law upgrades on specific groups of night drivers including belt use among drinking drivers (or some proxy thereof).





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## VII. Appendix A

### SEAT BELT OBSERVATION INSTRUCTIONS

- Eligible vehicles need to have at least, but not more than, four tires and be one of the following: Passenger automobile, pickup truck, recreational vehicle, jeep or van (private, public and commercial). Pickup trucks should be coded "truck." Jeeps, Broncos, Blazers and other vehicles of similar type should be coded "SUV." Eligible vehicles should be observed regardless of the State in which they are registered.
- **Do Not Include** in your observations vehicles with more than four tires, buses, motorcycles, and emergency vehicles such as police, fire, and ambulance, vehicles with mounted colored lights, government vehicles, and taxis.
- Belt use will be observed for front seat occupants only. Observe and record data for the driver and passenger in the right-front seat. If there is more than one front-seat passenger, observe only the "outside" passenger. Do not record data for passengers in the back seat or for a third passenger riding in the middle of the front seat.
- If a child is present in the front seat in a child restraint seat, do not record anything. However, children riding in the front seat, regardless of age, who are not in child restraint seats should be observed as any other front-seat passenger.
- Each observation period will last for 45 minutes.

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

1. As you observe an eligible vehicle, record the type of vehicle (car, truck, sport utility, van), the occupants race (white or non-white), sex (male or female) and restrained by shoulder belt (yes or no) of the front seat occupants (driver and front seat "outside" passenger only).
2. If you notice a lap belt in use without a shoulder belt, it should be recorded as not restrained. Only shoulder belts are to be counted.
3. If the vehicle is equipped with shoulder belts but the person has the shoulder strap under his/her arm or behind the back, this should be recorded as not restrained.
4. Observe traffic in each lane for an equal amount of time, and in the direction specified, throughout the 45-minute observation time period.
5. In many situations, it will be possible to observe every vehicle in the designated lane. However, if traffic is moving too fast to observe every vehicle, you should determine a focal point up the road in the appropriate lane. Observe the next vehicle to pass the focal point after the last vehicle has been coded.
6. Do not observe if it is raining, or if there is fog or inclement weather. If you arrive at a site and it begins to rain, do not collect data in the rain. Find a dry place and wait 15 minutes for weather to clear. If the weather clears, start observing again and extend the observation period to make up for the time missed. Otherwise, the site will be rescheduled. (Note: rain means heavy, consistent rain, not light fog, or drizzle, or mist).
7. If more than one data sheet is used, staple the sheets together at the end of the observation period and note the number of sheets used in the space provided at the bottom of the data form. Indicate on the form each time the observed lane changes.
8. It may happen that the site you are assigned to observe is seriously compromised due to construction or heavy traffic. If this occurs you may move one block in any direction on the same street such that you are observing the same flow of traffic that would typically have been observed had there been no construction. If moving one

block will not solve the problem, then do not observe. The site will be rescheduled for a future date OR an alternate site will be selected for immediate observation.

## VIII. Appendix B. BMV Survey Forms Comparison

The alternate survey included many of the same questions as the original survey, with 20 of the 22 questions on the original survey also appearing on the alternate form (the item *Police can only give you a seat belt warning if they only stop you for not wearing your seat belt* and the slogan recognition question were both missing from the alternate form). Given the similarities between the two forms, it was decided to use all the data from the common questions for Wave 3. As an added security, results from Wave 3 were compared across offices using each survey form and were tested for any significant differences. All analyses were carried out using chi-square tests with significance set at  $p < .01$ .

Respondents in offices using the alternate form showed a significantly different pattern of belt use than those in offices using the original form. To check if this pattern was unique to Wave 3, data from Waves 1 and 2 were also split along the same offices and compared. Any differences across offices found in Wave 1 or Wave 2 would suggest that the distinction is based on the particularities of the offices and not necessarily due to the different survey forms. On the question of frequency of belt use, Waves 1 and 2 showed a similar, albeit non-significant, pattern with the offices of Ellsworth, Kennebunk, Portland, and South Portland (offices using the alternate form in Wave 3) showing a higher frequency of seat belt use than the remaining offices.

In response to the item *Police can give you a seat belt ticket only if there has been an accident*, offices using the original survey had a significantly higher agreement rate than those using the alternate form. The same was true of Wave 1 (also significant) and Wave 2 (non-significant). The only other question to show a significant difference in Wave 3 was an item concerning awareness of extra enforcement. Offices using the original survey had a higher rate of awareness than those using the alternate survey. Waves 1 and 2 did not show any significant differences on this item. Thus, any differences between Waves 1 and 2 and Wave 3 appear not to be due to the different surveys but by changes occurring across waves.

***This Driver Licensing Office is assisting in a vehicle safety study. Your answers to the following questions are voluntary and anonymous. Please complete the survey and then put it in the drop box.***

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1. **Your sex:**             Male             Female
2. **Your age:**             Under 21     21-25         26-39         40-49         50-59         60 Plus
3. **Your Zip Code:** \_\_\_\_\_
4. **About how many miles did you drive last year?**  
 Less than 5,000     5,000 to 10,000     10,001 to 15,000     More than 15,000
5. **What type of vehicle do you drive most often?**  
 Passenger car     Pickup truck     Sport utility vehicle     Mini-van     Full-van     Other
6. **How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle or pickup?**  
 Always             Nearly always     Sometimes         Seldom         Never
7. **Compared to the last couple of years, would you say that you now wear your seat belt:**  
 Much less often     Less often         About the same     More often         Much more often
8. **Which of the following do you think is true (check all that apply):**  
 Police can only give you a seat belt warning if they only stop you for not wearing your seat belt  
 Police can give you a seat belt ticket only if they stop you for something else  
 Police can give you a seat belt ticket only if there has been an accident  
 Police can give you a seat belt ticket whenever they see you not wearing your seat belt
9. **Do you think your local Police enforce the seat belt law:**  
 Very strictly         Somewhat strictly     Not very strictly     Rarely         Not at all
10. **Do you think the Maine State Police enforce the seat belt law:**  
 Very strictly         Somewhat strictly     Not very strictly     Rarely         Not at all
11. **What do you think the chances are of getting a ticket if you don't wear your seat belt?**  
 Always             Nearly always     Sometimes         Seldom         Never
12. **Have you ever received a ticket for not wearing your seat belt?**             Yes             No
13. **If you were to get a seat belt ticket what would happen (Check all that apply):**  
 Could get ticket dismissed by going to court or traffic school  
 Pay a fine  
      How much?     \$10-\$15         \$20-\$25         \$30-\$35         \$50 or more  
 Don't know what would happen
14. **In the past month, have you seen or heard about extra enforcement where police were looking at seat belt use?**  
 Yes             No
15. **In the past month, have you personally experienced enforcement by police looking at seat belt use?**  
 Yes             No
16. **Have you recently read, seen or heard anything about seat belts in Maine?**  
 Yes             No
- If yes, where did you see or hear about it? (Check all that apply):**  
 Newspaper     Radio     Bus shelter     TV     Poster     Billboard     Police checkpoint     Other
- If yes, what did it say?**  
 Click it or Ticket     You Drink, You Drive, You Lose     Buckle Up Maine     55 Alive  
 Other \_\_\_\_\_



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

