

Safety Belt Use in Maine 2007

November 2007

Survey Research Center



UNIVERSITY OF
SOUTHERN MAINE

Safety Belt Use in Maine 2007

Al Leighton and Jen Dodge
Survey Research Center, Muskie School of Public Service
University of Southern Maine

November 30, 2007

Submitted to:



Bureau of Highway Safety
State of Maine
164 State House Station
Augusta, Maine 04333-0164

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ACKNOWLEDGMENTS

We would like to thank several people who were helpful in conducting this study. Lauren Stewart, Director, Bureau of Highway Safety worked with us on behalf of the Maine Bureau of Highway Safety. Gerry Audibert and Ed Beckwith at the Maine Department of Transportation provided all of the traffic data and location information for each of the observation sites. We especially want to express our appreciation for all of the efforts of Bill Leaf and Katie Ledingham at the Preusser Research Group in Trumbull, Connecticut. Their attention to detail regarding the data analysis and training of observers were crucial to the success of the project.

Finally, we thank the tremendous contributions of the Survey Research Center observers: Margaret Gormley, Tom Buchanan, Sharleen Garvey, Sandra Graham, Tim Hayes, Jan Johnson, Anita Linnell, Cheryl Saliwanchik-Brown, and Sue Schier.

Al Leighton, Jen Dodge
Survey Research Center
Muskie School of Public Service
University of Southern Maine

EXECUTIVE SUMMARY

Since 1986, the Maine Bureau of Highway Safety has periodically had an observation study of safety belt use in Maine conducted to determine the level of compliance in the state. For the year 2007, the Survey Research Center (SRC) at the Muskie School of Public Service, University of Southern Maine, with assistance from the Preusser Research Group of Trumbull, Connecticut, conducted the study and produced this report of the findings. Research results from this study provide the official measure of belt use in Maine, and provide valuable information regarding the success of the state's efforts to educate the public about the importance of safety belt use. Furthermore, increased seatbelt use can lead to additional funding from the National Highway Traffic Safety Administration (NHTSA).

In 2007, in order to obtain an accurate measure of change in use rates over time, observations were recorded at the same 120 sites as the previous two years. In the vast majority of cases (over 90%), observations were conducted on the same day of the week and at the same time of day as in 2005 and 2006; frequently, the same observer went to the same site. A probability based sampling method was utilized to select the 120 segments to be observed. Among the locations chosen were sites on I-95, I-295, and the Maine Turnpike. As a result, all types of roads and traffic were observed. As in all prior studies, visual observations were made to determine the extent of use.

In the past three years and again this year, the observations were done immediately after a major campaign to raise awareness of Maine's seatbelt laws. Radio ads about seatbelt use received heavy air play in many parts of the state. In addition, many police departments conducted a coordinated and highly visible enforcement campaign. While we speculated in the past that these steps might temporarily lead to an increased use rate, at least during the time of the campaign and shortly after, a sub-sample test done during the 2005 observation study found that effect to be relatively minor.

In 1998 NHTSA developed new methods and standardized guidelines for measuring seat belt use. As a result, use rates can now be compared between states more accurately than was the case in the past. This study meets all of the applicable NHTSA criteria. It also follows the NHTSA guidelines regarding sample selection. Under these guidelines, sites selected must represent 85% of the state's population; in Maine, that requires sampling from the 10 counties with the highest population. See Table 11 for the list of counties studied.

Road sections selected as observation sites. Observations of seatbelt use were conducted at 120 sites from the 10 counties (see Table 11 for a full list of towns selected). Sites were selected following a probability-based sampling procedure developed by the Preusser Research Group and approved by

NHTSA on July 26, 2004. Restraint use was recorded for 23,462 drivers and front seat passengers in 18,192 vehicles (in the 2006 study, 18,027 vehicles and 22,464 occupants were recorded).

Sampling and estimating protocols. In 1998, NHTSA began to institute new standardized sampling and estimating protocols for all states to follow in their safety belt use studies. These procedures were developed to ensure comparability among findings from state to state. The new estimation formulae are intended to provide each state with very precise estimates of their statewide belt use rates. These formulae provide a statistically sound method to calculate weights that will help adjust sample data to better reflect the volume and types of traffic found in all roads in a state, not just those selected for observation. Since 2004, Maine's sampling procedures have been based primarily on traffic data known as the Daily Vehicle Miles Traveled (DVMT) for each county in the State. These data provide a measure of the volume of traffic at each road segment in Maine.

One of the results of adopting new estimation methods is that the findings since 2004 are not entirely comparable to those from previous years. Different methods can produce different results, which is why NHTSA has adopted the new standardized methods. We support the use of the new estimation approach and NHTSA's efforts to bring consistency and uniformity to all of the states but remind readers that, because of these changes, results from this year's study are not quite equivalent to those conducted prior to 2004.

Subgroup analyses. This report includes findings from several subgroups, such as for different seating positions, type of vehicle, etc. We urge readers to keep in mind that some of these groups have lower numbers and, therefore, the point estimates of their use rates are less precise than those for the entire sample.

OBSERVATION STUDY FINDINGS

Overview: Compliance with the law. The overall restraint use continued to increase in 2007, to 79.8%. In 2002, the statewide use rate was only 59%. By 2006, that rate had increased to 77.2%. As in 2005 and 2006, passengers have a higher rate of safety belt use than the drivers. Table A shows changes in the rates for drivers and passengers for all 3 years.

Table A
Comparison of seat belt usage rates statewide:

Occupants Observed	2007 Study	2006 Study	2005 Study
All Drivers	79.4%	76.7%	75.2%
All Front Passenger Seat Occupants	80.4%	79.7%	78.4%

Gender differences. Women in particular show substantial compliance with seatbelt laws. Table B shows gender differences for 2007, 2006 and 2005.

Table B
Comparison of seat belt usage rates by male and female:

Gender	2007 Study	2006 Study	2005 Study
Male Driver	75.5%	72.0%	71.5%
Female Driver	85.1%	83.6%	80.8%
Male Passenger	70.1%	67.2%	69.3%
Female Passenger	85.0%	86.6%	83.7%

Passengers' use of safety belts related to use by driver. As with prior studies, belt use of passengers is strongly correlated with the practices of the drivers. When drivers use their safety belts, other occupants of the vehicle (who are most likely friends or family of the driver) are nearly three times as likely to use their belts than they are when the driver is not using a belt (92.3% vs. 35.9%).

Comparison with other states. While Maine's safety belt use has improved considerably since 1995, other states have increased as well¹. As a result, the state is still near the bottom nationally. In 1995, Maine's rate of only 50% was the fifth from the bottom of a list of all 50 states, the District of Columbia, and Puerto Rico. By 1997, Maine's use rate had risen only to number 35², and by 2006, Maine had dropped to number 37, when only 13 states reported lower use rates. Because NHTSA has not yet released the 2007 use rates for all states, it is not possible to report where Maine now stands but it most likely will remain among the country's lower rates.

Type of vehicle. As has been the case in every study conducted in Maine, people in pickup trucks have the lowest use rates, at 68.6%. This is a substantial increase from the 39.7% reported in 2002, but continues to be an area where considerable improvement is still possible. Vans, SUVs, and cars have use rates of 83.6, 82.6 and 82.1%, respectively. Values for all vehicle types show increases of 2 – 5% from 2006 except SUVs, which show a slight decline from the 83.5% observed last year.

SUMMARY

Safety belt use in Maine has increased markedly since 1991, when only a third of people aged 16 and over were belted. (Another change in study methods should be noted here: In all of the studies conducted during the 1990s, information for all vehicle occupants, including children, was recorded, as well as the estimated age of each individual. Children are no longer included for observations, nor is age estimated. See SRC's report "Child Safety Seat Use in Maine 2007" for details regarding current safety seat and seat belt use among children in Maine.) While the new rate of 79.8% is encouraging, it appears that some groups, particularly males, still have room for a great deal of improvement.

The impact of safety belt use is significant. Research published by NHTSA in 2003 stated that, when properly used, lap/shoulder safety belts reduce the risk of fatal injury to front-seat passenger car occupants by 45%; they reduce the risk of moderate-to-critical injury by 50%. The safety effect is even greater for light truck occupants, where safety belts reduce the risk of fatal injury by 60% and moderate-to-critical injury by 65%. The same study estimates that nearly 15,000 lives were saved by using safety belts in the year 2003.³ It is research findings such as these that provide much of the impetus for continuing efforts to increase seatbelt use in Maine and the nation.

Safety Belt Use in Maine, 2007

This year's study, like last year's, was conducted immediately after a massive enforcement and publicity campaign meant to increase safety belt usage. The rest of this report describes how the 2007 study was implemented and presents the key findings. It also shows comparisons between 2007 and some of the earlier studies. The project was conducted thanks to a contract between the Bureau of Highway Safety, Department of Public Safety, State of Maine, and the Survey Research Center at the Muskie School of Public Service, University of Southern Maine (USM), along with a subcontract between USM and the Preusser Research Group in Trumbull, Connecticut.

Portland, Maine

November 30, 2007

INTRODUCTION

The impact of seatbelt use is substantial. Research reported by NHTSA in 1996 found that three out of every five people who die in vehicle crashes would have survived if they had been wearing their safety belts. At that time, it was found that average hospitalization costs were nearly \$5,000 less for people injured in crashes and hospitalized if they were wearing their safety belts at the time of the crash.⁴ Nationally, about 81% of all motorists now use their safety belts.⁵

Prior to 1996, when mandatory seatbelt laws for adults went into effect, Maine motorists used their seatbelts at a rate only about half of the national rate.⁶ In November 1995, Maine voters narrowly approved a referendum establishing a secondary enforcement law requiring almost all people to wear safety belts or use child restraint devices. Since then, use rates in Maine have improved a great deal. The study here reports on results from an observation study conducted in 2007, several years after the last major change in seatbelt laws in the state (although it should be noted that this year, Maine's legislature passed a primary enforcement law. While it didn't go into effect until September 20, 2007 and ticketing won't begin until April 1, 2008, awareness of the new law seems high and may have contributed to higher use rates). The data contained in this report are used to provide the Bureau of Highway Safety and the National Highway Traffic Safety Administration with the current use rates and a measure of changing use patterns over time.

The research project was conducted by the Survey Research Center of the Muskie School of Public Service at the University of Southern Maine, under a contract with the Maine Bureau of Highway Safety, Department of Public Safety, State of Maine. The study was designed to determine the rate of safety restraint use in Maine as part of the development of a statewide comprehensive highway safety plan as required by NHTSA. It incorporates the standardized design requirements developed by NHTSA in an effort to ensure reliability and comparability of findings between each of the states.

METHODOLOGY

In 2004, a number of methodological changes were introduced in the observation study. These include the selection of road segments for observation, instead of controlled intersections; observation of moving vehicles, rather than stopped vehicles; observations on the Maine Turnpike and Interstates; and the end of the practice of recording use for infants, children and young teenagers (and the related practice of estimating ages of occupants). All of these changes have continued this year. While all previous studies have met NHTSA guidelines and represent the official state use rates, the effect of these changes means that direct comparisons may not be entirely accurate between studies conducted prior to 2004 and those conducted since. The following is a description of the changes that were implemented and their potential impact.

The biggest change in protocols in 2004 was that of sampling from all road segments on all types of roads rather than only selecting controlled intersections, as had been the practice up until 2004. It is possible that only recording cars and trucks at traffic signals is not representative of all traffic in the state. For instance, it may be that people traveling on roads with enough traffic to warrant a traffic signal are more likely to buckle up than those on less busy sections of roads. Or it might be that, where there are red lights to slow traffic down, people feel less need to use their belts. In either case, the presence of a traffic signal might affect use rates at each site; recording usage only at signalized intersections could affect the statewide measure of use. Similarly, including traffic on highways affects the results. A great deal of Maine's traffic is on the turnpike and interstates. Not including any of that traffic, which may have different use patterns, potentially impacted use rates measured. With the new protocols, the presence of traffic lights and absence of highway driving is no longer a factor in the estimates reported.

The next most significant change that took effect in 2004 was the observation of moving vehicles. Here it must be stated that recording use of occupants in moving cars and trucks is more difficult than observing stopped vehicles. There are several factors that make it harder—tinted windows, glare of sunlight, dark seatbelts on dark clothing, etc., not to mention the speed of cars on some roads. We suspect this may lead to slightly higher estimates of use.

In addition to these methodological adjustments, another important factor is the highly advertised and visible awareness and enforcement campaign that was conducted immediately before the study was begun. While this seems to have the effect of at least temporarily boosting people's likelihood of using safety belts, the 2005 "mini survey" before the campaign began found the impact to be relatively minor.

Road sections selected as observation sites. Observation sites must allow the opportunity for a reasonably representative flow of multi-purpose traffic, while allowing observers a safe viewing position from which to observe and record belt use of occupants in each vehicle. Observers were given descriptions of the road segment to observe (e.g., “Auburn, on Minot Avenue, between Heath Lane and Garfield Road”). They were also told which direction of traffic to observe. They then were able to find the most advantageous spot on the road segment from which to observe. They were instructed to only include vehicles that had actually passed through the first identifier of the description (in the example above, the intersection of Minot Avenue and Heath Lane). Observations were conducted from a single point on each segment. In all, observations of 18,192 passenger vehicles and the use or nonuse of 23,462 occupants were recorded. A list of the towns and cities selected appears as Table 11.

Sampling. The sites to be observed were selected by the Preusser Research Group of Trumbull, Conn. The sampling design was developed to ensure compliance with NHTSA’s standardized guidelines. The sampling process was designed to provide a confidence level of 95% with an acceptable margin of error of plus or minus 5%. This resulted in a final sample size of 120 road segments. Road segments were selected with probability of selection being proportional to the traffic volume measured in average daily vehicle-miles traveled (DVMT) on each road segment, according to Maine Department of Transportation data. Again, in 2007, the same 120 sites were observed as in 2004 through 2006.

Weighting. Consistent with NHTSA guidelines, the data were weighted to reflect the sampling design and the average traffic volume at the selected road segments. The weighting simply adjusts the actual number of vehicles observed to reflect the expected number of vehicles, based on the traffic volume where the segment is located, and combines the site data in a way that represents statewide traffic volumes.

Observation times and days. Observations were made at 120 locations throughout the state for 45 minutes each, on a structured schedule of observation times and days that would maximize the opportunity to study variations in restraint use by time and by day of week. 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. All observations were done during daylight hours. Approximately 90% of the 2007 observations were done on the same day and time as the 2004 through 2006 observations. For those few that were done on a different day or time (due to weather, schedules, etc), they 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.

Many roads have two or more lanes of traffic. In those cases, the observation period was divided by the number of lanes, and each lane was observed for the proportional length of time. For example, a road with

three lanes would require that each lane be observed for 15 minutes (three lanes times 15 minutes each equals 45 minutes, the full observation period).

Observation assignments were made across a schedule of time slots that began at 7:00 a.m. and ended at 5:45 p.m. They were conducted from June 6 to July 6, 2007 (Note: only one site was observed after July 4th; all other observations were conducted prior to the holiday).

Observer training. Observers were trained by Katie Ledingham from the Preusser Research Group. They were trained to observe proper shoulder belt use (vs. improper or no use) of the driver and, if present, a right front seat passenger judged to be age 16 or older. Observations were made for private passenger vehicles only. These were the same methods used in Maine in previous years and in numerous other seatbelt observation efforts. The training involved written material, oral presentation, and field practice. The field practice was conducted on Forest Avenue in Portland, near the SRC office. The practice observations were crucial. Results were reviewed and analyzed for accuracy and consistency; no observers were allowed to begin until their practice observations met training standards.

OBSERVATION STUDY FINDINGS

Overview: Compliance with the law. The latest use figures show a higher proportion of Maine's population buckling up, 79.8% overall. They also show some improvement in categories that had declined from 2005 to 2006 (males and people in pickup trucks). However, for the second year in a row, some categories declined from last year's rates. Use rates for female passengers dropped from 86.6% in 2006 to 85.0% in 2007, and those in SUVs declined from 83.5% last year to 82.6% this year. And even with the new higher overall rate, Maine still ranks low compared to most other states.⁷ In order to raise rates relative to other states, it seems likely that Maine will still require an on-going effort of education and enforcement or legislative changes.

Gender differences. Female use rate has been consistently higher than that of males; that pattern continues in 2007. While 85.4% of all female occupants were restrained, only 74.9% of males were using their seatbelts. For the first time, we found a drop in one of the female subgroups (female passengers, as reported above). As has been the case in every previous study done in Maine, males continue to lag behind females in seatbelt use.

Seating position. Overall, there is little difference in use rates by seating position within vehicles. In 2007, 79.4% of drivers were using seatbelts and 80.4% of passengers were using theirs.

Urban/rural differences. The belt use rate in urban counties (Androscoggin, Cumberland, Kennebec, Penobscot, and York) continues to be higher than in rural counties, at 83% and 76% respectively. The gap between the two areas continues to narrow, however, with the difference dropping to less than 10 percentage points for the first time (Note: due to the statistical difficulties of weighting data by ten different counties, various road types and traffic volume at all road segments, these data are not weighted). In a reflection of changing population patterns in the state, 62% of the segments selected were in the 5 urban counties. Due to the higher traffic volume in those areas, 73% of vehicles observed were in urban counties, and 27% were in the rural counties.

Type of vehicle. There is one clear difference in driver safety belt use rates according to the type of vehicle the driver is operating. At 68.6%, drivers of pickup trucks have a considerably lower use rate than any of the other types of vehicles (see Table 7). It is likely that the selection of a vehicle and the decision of whether to buckle up or not are both related to gender, age, lifestyle and other factors so this may not be a surprising finding; it certainly has been consistent over the years.

Passenger use related to use by driver. As in all prior studies, buckling up is a friend and family affair. When drivers use their safety belts, other occupants of the vehicle (who are most likely friends or family of

the driver) are nearly three times as likely to use their belts as they are when the driver is not using a belt 92.3% vs. 35.9%; see Table 8.

Comparison with other states. While Maine's use rate has improved since 2002, other states have also improved.⁸ The net result is that Maine may have actually declined in national standings. As of this writing, NHTSA has not released 2007 rates so Table 10 only reports changes in use rates from 2005 to 2006. While final comparisons between states can not yet be made, the 2006 findings in Table 10 suggest that Maine will likely still be near the middle or bottom when the state by state listing for 2007 is complete.

Day of week. Observations were conducted on all days of the week, and while there are variations in safety belt usage across the days (Table 7), there is no readily apparent pattern to the findings. The assignment of days and times of observation to the sites was systematic and unbiased, but the number of observations obtained on each day varied considerably because the traffic volume at the selected sites varied. Use rates are highest on Fridays (85%) and lowest on Mondays, at 76%. The days with the highest and lowest rates have varied from year to year.

Time of day. Safety belt use varies throughout the day (Table 7). The highest rates are at 1:00 p.m. (86%), followed by 10:45 a.m. and 5:30 p.m. (84% each). The lowest rates occur at 1:45 p.m. and 9:15 a.m., at 74% each. Time of day rates have also varied from year to year.

Weather and road conditions. Most observations were able to be conducted on schedule this year, with few being rained out. Overall, 66% of vehicles were observed in sunny and clear weather, the rest during cloudy, foggy, or rainy weather. There was considerable variation in use, ranging from 63% in rainy weather to 88% in fog. These two conditions had very few observations, however, so the 79% use in sunny weather and 83% in cloudy weather are probably more meaningful (see Table 7).

Comparison of 2007 with 2005 and 2006 data. Several studies in Maine have now been conducted for the Bureau of Highway Safety of the Maine Department of Public Safety. The first was done by Northeast Research for the School of Public Health of the Boston University Medical School.⁹ The next four were conducted by the Muskie School's Survey Research Center.¹⁰ The year 2002 study was completed by CSI® Santa Rita Research Center.¹¹

The 2007 study is now the eighth conducted by the Muskie School. As described in the Methodology section, there were a number of major changes in the study design that were implemented in 2004. In addition, over the years there have been other changes made, so direct comparisons between years may not be entirely appropriate.

Safety Belt Use in Maine, 2007

In 2002, overall compliance stood at approximately 59%. At that time, the rate for people over 18 was also 59%. Beginning in 2004, only adults were recorded (although it is likely that some mid- to older teens were inadvertently included). The rate for 2005 had increased to 76% and to 77% in 2006. Now, in 2007, the use rate has increased again to almost 80%.

Continuing a shift that first occurred in 2004, passengers have a higher rate of belt use (80%) than drivers (79%). In 2006, 80% of adult passengers were restrained while 77% of drivers used seatbelts. In 2005, the respective figures were 78% and 75%.

A comparison of male drivers to female drivers over the three studies shows some improvement among males. For the year 2005, male drivers had a use rate of 72% and females had a rate of 81%. In 2006, the comparable figures were 72% for males and 84% for females. The 2007 results show male drivers improving to 76% and female drivers increasing slightly to 85%. While the “gender gap” has narrowed over the earlier studies, it continues to exist through the current year.

During the early to mid-nineties, seatbelt use in Maine increased substantially. By 1997, however, that trend had ended. From then through 2002, there was no overall increase and even some declines in certain areas. The years of increase correspond to a time when a number of changes were made in seatbelt laws in the state—in 1989, the law was expanded to require all occupants age 4 to 19 to use restraints. In 1993, fines for violations were increased. And most importantly, in 1995, a statewide referendum requiring all adults 19 and older to use safety belts was passed. From 1995 through 2006, there were no major revisions to Maine’s belt laws.

SUMMARY

Safety restraint use has increased significantly in Maine, doubling from a rate of only 36% in 1991 to just under 80% in 2007. Much of the early increase has probably been a direct result of changes in laws governing seatbelt use. The biggest increase has been among males, although men remain consistently behind women in usage.

In 2006, for the first time, use rates declined in some categories; 2007 also saw some declines. It is likely that further media campaigns, education, and law enforcement efforts will be necessary to increase the current use level. The 2008 study will be the first to measure the impact of the new primary enforcement law. Future studies may help to establish if additional legal incentives are necessary to ensure that Maine’s higher level of safety in passenger vehicles will be maintained.

ENDNOTES

¹ U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts Crash Stats, April 2007, Research Note*, DOT HS 810 690.

² Al Leighton and Erika Ziller, *Safety Belt Use in Maine 1998*, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, April 1999.

³ U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2003, Occupant Protection*, DOT HS 809 765.

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⁵ U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts Crash Stats, April 2007, Research Note*, DOT HS 810 690.

⁶ Suzanne K. Hart, *Child Restraint Device and Safety Belt Use in Maine*, 1991, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, August 1992; and Deidre Hungerford, David Kovenock, and James Sorg, *Maine Seat Belt Use Observation Study*, February, 1986: *Preliminary Summary*, Northeast Research, Orono, Maine, 1986.

⁷ U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2005, Research Note*, DOT HS 809 970.

⁸ U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2005, Research Note*, DOT HS 809 970.

⁹ Deidre Hungerford, David Kovenock, and James Sorg, *Maine Seat Belt Use Observation Study*, February, 1986: *Preliminary Summary*, Northeast Research, Orono, Maine, 1986.

¹⁰ Al Leighton, Erika Ziller and Suzanne K. Hart, *Safety Belt Use in Maine 1991, 1995, 1997, 1998*, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine, prepared for the Bureau of Highway Safety, Department of Public Safety, State of Maine, 1992, 1995, 1997, 1999.

¹¹ Ash Bose, *Safety Belt Use in Maine 2002*, CSI Santa Rita Research Center, Communication Software, Inc., Arizona, December, 2002.

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TABLE 1

**Restraint Use in Passenger Vehicles
Statewide**

Maine, 2007

All Persons

All Persons	
Lap/Shoulder	79.8%
No Restraint	20.2%
No. Vehicles = 18,192; No. Persons = 23,462	

TABLE 2

**Restraint Use in Passenger Vehicles
Statewide
By Seating Position**

Maine, 2007

All Persons

Driver		Passenger	
Lap/Shoulder	79.4%	Lap/Shoulder	80.4%
No Restraint	20.6%	No Restraint	19.6%
N = 17,924		N = 5,538	

TABLE 3

**Restraint Use in Passenger Vehicles
Statewide**

Maine, 2007

Males

All Males	
Lap/Shoulder	74.9%
No Restraint	25.1%
N =12,026	

TABLE 4

**Restraint Use in Passenger Vehicles
Statewide
By seating position**

Maine, 2007

Males

Driver		Passenger	
Lap/Shoulder	75.5%	Lap/Shoulder	70.1%
No Restraint	24.5%	No Restraint	29.9%
N = 10,379		N = 1,647	

TABLE 5

**Restraint Use in Passenger Vehicles
Statewide**

Maine, 2007

Females

All Females	
Lap/Shoulder	85.4%
No Restraint	14.6%
N = 11,130	

TABLE 6

**Restraint Use in Passenger Vehicles
Statewide
By seating position**

Maine, 2007

Females

Driver		Passenger	
Lap/Shoulder	85.1%	Lap/Shoulder	85.0%
No Restraint	14.9%	No Restraint	15.0%
N = 7,359		N = 3,771	

TABLE 7
Percentage of Drivers Wearing Safety Belts
Under Selected Conditions
Statewide

Maine, 2007

Type of Vehicle

Vehicle Type		Belt Use
Car	(N = 9,344)	82.1%
SUV	(N = 3,763)	82.6%
Van	(N = 1,537)	83.6%
Truck	(N = 3,280)	68.6%

Day of the Week

(Note: data in the rest of this table
are not weighted)

Percent of Drivers
Wearing Safety Belts

Monday	(N = 2,546)	76.5%
Tuesday	(N = 2,349)	81.8%
Wednesday	(N = 2,992)	77.9%
Thursday	(N = 3,021)	80.4%
Friday	(N = 2,463)	84.6%
Saturday	(N = 2,846)	79.9%
Sunday	(N = 1,980)	77.6%

Table 7, cont'd

Weather¹		Percent of Drivers Wearing Safety Belts
Sunny/Clear	(N = 12,002)	78.6%
Raining	(N = 304)	63.5%
Cloudy	(N = 5,164)	82.8%
Fog	(N = 578)	88.2%
Wet/Not Raining	(N = 149)	77.2%

1 Observations of **Sunny/Clear** and **Cloudy** imply the roads are dry. **Raining** corresponds to light rain occurring during the observations (data are not collected in heavy rain) and thus the roads are wet.

Start Time of Observation		Percent of Drivers Wearing Safety Belts
7:00 a.m.	(N = 979)	83.2%
7:45 a.m.	(N = 1,279)	81.1%
8:30 a.m.	(N = 873)	82.8%
9:15 a.m.	(N = 743)	74.2%
10:00 a.m.	(N = 770)	76.6%
10:45 a.m.	(N = 1,099)	84.4%
11:30 a.m.	(N = 1,169)	74.5%
12:15 p.m.	(N = 1,014)	76.5%
1:00 p.m.	(N = 1,285)	85.5%
1:45 p.m.	(N = 1,737)	73.9%
2:30 p.m.	(N = 1,219)	79.2%
3:15 p.m.	(N = 1,561)	75.0%
4:00 p.m.	(N = 1,623)	83.4%
4:45 p.m.	(N = 1,581)	82.2%
5:30 p.m.	(N = 1,265)	84.0%

TABLE 8

**Passenger belt use/nonuse
compared to Driver belt use/nonuse**
NOTE: Data in this table are NOT weighted

Maine, 2007

When the driver IS wearing a belt

Driver	Passenger	
NOT APPLICABLE	Lap/Shoulder	92.3%
	No Restraint	7.7%
N = Not Applicable	N = 4,564	

When the driver is NOT wearing a belt

Driver	Passenger	
NOT APPLICABLE	Lap/Shoulder	35.9%
	No Restraint	64.1%
N = Not Applicable	N = 905	

TABLE 9

**Restraint Use All Occupants, All Vehicles
Grouped by Observation Sites in Urban and Rural Counties**
NOTE: Data in this table are NOT weighted

Maine, 2007

RESTRAINT TYPE	URBAN		RURAL		STATEWIDE	
	N	%	N	%	N	%
Lap/Shoulder Belt	14,198	83.5	4,917	76.3	19,115	81.5
No Lap/Shoulder Belt	2,816	16.5	1,531	23.7	4,347	18.5
Lap/Shoulder Belt TOTAL	17,014	100.0	6,448	100.0	23,462	100.0

TABLE 10

Observed Safety Belt Use Rates Reported by States to NHTSA
2005 and 2006

2005 and 2006 State Belt Use Rates					
State	2005 ¹	2006	State	2005 ¹	2006
Alabama	82%	83%	Montana	80%	79%
Alaska	78%	83%	Nebraska	79%	76%
Arizona	94%	79%	Nevada	95%	91%
Arkansas	68%	69%	New Hampshire	*	64%
California	93%	93%	New Jersey	86%	90%
Colorado	79%	80%	New Mexico	90%	90%
Connecticut	82%	84%	New York	85%	83%
Delaware	84%	86%	North Carolina	87%	89%
District of Columbia	89%	85%	North Dakota	76%	79%
Florida	74%	81%	Ohio	79%	82%
Georgia	82%	90%	Oklahoma	83%	84%
Hawaii	95%	93%	Oregon	93%	94%
Idaho	76%	80%	Pennsylvania	83%	86%
Illinois	86%	88%	Rhode Island	75%	74%
Indiana	81%	84%	South Carolina	70%	73%
Iowa	86%	90%	South Dakota	69%	71%
Kansas	69%	74%	Tennessee	74%	79%
Kentucky	67%	67%	Texas	90%	90%
Louisiana	78%	75%	Utah	87%	89%
Maine	76%	77%	Vermont	85%	82%
Maryland	91%	97%	Virginia	80%	79%
Massachusetts	65%	67%	Washington	95%	96%
Michigan	93%	94%	West Virginia	85%	89%
Minnesota	83%	83%	Wisconsin	73%	75%
Mississippi	61%	73%	Wyoming	*	64%
Missouri	77%	75%	Puerto Rico	93%	93%

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts, Crash Stats, April 2007*, Research Note DOT HS 810 690.

¹ Rates in states with primary belt enforcement laws appear in boldface. **Primary Enforcement:** Allows police to stop and cite motorists simply for not wearing seat belts. An asterisk denotes that no rate compliant with Section 157 was submitted to NHTSA.

Secondary Enforcement: Motorists must be stopped for another reason in order to receive a seat belt citation.

TABLE 11
Maine 2007 Observation Sites List

1. Cumberland County (18) <ol style="list-style-type: none">1. Portland (4)2. Freeport (3)3. Westbrook (3)4. South Portland (2)5. Casco (1)6. Cumberland (1)7. Gray (1)8. Raymond (1)9. Scarborough (1)10. Windham (1)	4. Kennebec (13) <ol style="list-style-type: none">1. Augusta (2)2. Sidney (2)3. Waterville (2)4. China (1)5. Hallowell (1)6. Monmouth (1)7. Oakland (1)8. Pittston (1)9. Readfield (1)10. West Gardiner (1)	7. Hancock (9) <ol style="list-style-type: none">1. Bar Harbor (1)2. Ellsworth (2)3. Stonington (2)4. Bucksport (1)5. Dedham (1)6. Deer Isle (1)7. Township 28 (1)
2. York (16) <ol style="list-style-type: none">1. Saco (3)2. Biddeford (2)3. Kittery (2)4. North Berwick (2)5. Wells (2)6. Acton (1)7. Eliot (1)8. Lyman (1)9. Sanford (1)10. Shapleigh (1)	5. Androscoggin (12) <ol style="list-style-type: none">1. Auburn (3)2. Lewiston (3)3. Sabattus (3)4. Livermore Falls (1)5. Poland (1)6. Turner (1)	8. Oxford (9) <ol style="list-style-type: none">1. Fryeburg (3)2. Greenwood (1)3. Hebron (1)4. Norway (1)5. Rumford (1)6. Sumner (1)7. West Paris (1)
3. Penobscot (15) <ol style="list-style-type: none">1. Bangor (5)2. Brewer (1)3. Carmel (1)4. Hermon (1)5. Holden (1)6. Howland (1)7. Mattawamkeag (1)8. Millinocket (1)9. Old Town (1)10. Orono (1)11. Plymouth (1)	6. Aroostook (12) <ol style="list-style-type: none">1. Caribou (3)2. Ashland (1)3. Fort Fairfield (1)4. Hodgdon (1)5. Limestone (1)6. Masardis (1)7. Sherman (1)8. Van Buren (1)9. Wade (1)10. Woodland (1)	9. Somerset (9) <ol style="list-style-type: none">1. Fairfield (2)2. Anson (1)3. Caratunk (1)4. Harmony (1)5. Madison (1)6. Norridgewock (1)7. Pittsfield (1)8. Starks (1)
		10. Knox (7) <ol style="list-style-type: none">1. Rockport (3)2. Rockland (2)3. S. Thomaston (1)4. Thomaston (1)

History of Occupant Protection Laws

EFFECTIVE
DATES

LAWS

09-20-07	Primary enforcement law takes effect; ticketing to begin on April 1, 2008.
01-01-03	The operator is responsible for ensuring that a child (from 40 pounds but less than 80 pounds and less than 8 years of age) is properly secured in a federally approved child restraint system.
09-19-97	The operator is responsible for securing persons under age 18 in a safety belt/seat. Persons 18 years and older are responsible for securing themselves.
09-19-97	A law enforcement officer may take enforcement action against an operator or passenger 18 years or age or older who fails to wear a seat belt only if the officer detains the operator for a suspected violation of another law. The requirement that the operator must receive a fine for the other violation in order to be subject to a penalty for the seat belt violation has been deleted.
01-01-95	With the implementation of Title 29A, the child safety seat law and seat belt law were combined into one law.
12-27-95	A statewide referendum requiring adults 19 and older to use safety belts passed on 11-07-95. The law could be enforced only if the police officer had detained the operator of a motor vehicle for a suspected violation of another law.
07-94	Driver made responsible for securing children under 4 years in a child safety seat.
10-13-93	Penalty <u>changed from fine of \$25</u> for first violation and \$50 for each subsequent violation for those aged 0 to 4 <u>to traffic infraction (up to \$500 fine).</u>
10-13-93	Penalty <u>changed from fine of \$25</u> for first violation and \$200 for each subsequent violation for those 4 to 19 <u>to traffic infraction (up to \$500 fine).</u>
09-29-87	Children aged 4 to 13 years must be secured in a child safety seat or safety belt.
09-30-89	Law expanded to include children 4 to 16 years.
10-09-91	Law expanded to include persons 4 to 19 years.
09-23-83	Children aged 0 to 4 years must be secured in a child safety seat.

Maine Seat Belt Observation Form

SITE NUMBER: _____ SITE: _____

NOTES: _____

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

WEATHER CONDITIONS
 1 Clear / Sunny 4 Fog
 2 Light Rain 5 Clear but Wet
 3 Cloudy

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

START TIME: _____ (Observation period will last exactly 45 minutes)

DRIVER				PASSENGER				DRIVER				PASSENGER			
Veh. #	Vehicle C = car T = truck S = SUV V = van	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Veh. #	Vehicle C = car T = truck S = SUV V = van	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure	Veh. #	Vehicle C = car T = truck S = SUV V = van	Sex M = male F = female U = unsure	Use + = yes - = no U = unsure
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