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# *Safety Belt Use in Maine*

## *1997*



*Prepared for the  
Bureau of Highway Safety  
Department of Public Safety  
State of Maine*

*by*

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January 1998

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## Table of Contents

ACKNOWLEDGMENTS .....	3
EXECUTIVE SUMMARY .....	4
INTRODUCTION.....	10
METHODOLOGY .....	12
<i>Selection of four-leg intersections as primary observation sites.</i> .....	12
<i>Supplementary selection of rural intersections</i> .....	13
<i>Sampling</i> .....	13
<i>Weighting</i> .....	14
<i>Observation times and days</i> .....	14
<i>Observer training</i> .....	15
INTERSECTION OBSERVATION STUDY FINDINGS .....	15
Restraint Use by Age and Gender .....	15
<i>Contents of this section</i> .....	15
<i>Comparing age group-specific use rates with results of prior studies</i> ....	15
<i>Overview: Compliance with the law</i> .....	16
Adults aged nineteen and over.....	18
Children and youth .....	18
<i>Children aged four through eighteen</i> .....	18
<i>Children aged four through ten.</i> .....	19
<i>Children aged eleven through fourteen</i> .....	19
<i>Children aged fifteen through eighteen</i> .....	20
<i>Summary: Children aged four through fourteen</i> .....	20

<i>Children from birth through three years</i> .....	20
<i>Infants in their first year of age</i> .....	21
<i>Toddlers aged one through three</i> .....	21
<b>Passengers' use of safety belts related to use by driver</b> .....	22
<b>Comparison with other geographic areas</b> .....	22
<b>Comparison of 1997 with 1986, 1991 and 1995 Maine data</b> .....	22
<i>Summary: Change from 1986 to 1997</i> .....	24
<b>Driver Restraint Use by Site and Vehicle Characteristics</b> .....	27
<i>In-state and out-of-state vehicle registration</i> .....	27
<i>Size and type of vehicle</i> .....	27
<i>Helmet use by motorcycle riders</i> .....	28
<i>Day of the week</i> .....	28
<i>Time of day</i> .....	29
<i>Weather and road conditions</i> .....	29
<i>Urban and rural locations</i> .....	29
<b>Summary</b> .....	30
<b>End Notes</b> .....	31

## TABLE OF TABLES

## TABLES 1-23

## HISTORY OF OCCUPANT PROTECTION LAWS



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**Safety Belt Use in Maine, 1997  
EXECUTIVE SUMMARY**

Research findings from 1996 show that three out of every five persons who died in vehicle crashes would have survived if they had been wearing their safety belts. Average hospitalization costs were nearly \$5,000 less for persons injured in crashes and hospitalized, if they were wearing their safety belts at the time of the crash. Nationally, about sixty-seven percent of motorists use their safety belts.<sup>1</sup>

In the absence of a mandatory use law for adults until early 1996, the rate at which motorists in Maine have worn their safety belts has been about half the national rate.<sup>2</sup> In November 1995, Maine voters narrowly approved a referendum question establishing a secondary enforcement law requiring all persons to wear safety belts, or, in the case of children and infants, be appropriately placed in child restraint devices (CRDs). The study reported here is an observation study of safety belts and child restraint device use conducted in late summer 1997, less than two years after the new law had been implemented. Comparisons of these 1997 data with the 1995 findings provide the Bureau of Highway Safety with the primary measure of the effect of changes in the law, by showing the extent to which use rates have changed following implementation of the new law.

The research project was conducted jointly by the Survey Research Center of the Edmund S. Muskie School of Public Service at the University of Southern Maine and the Margaret Chase Smith Center for Public Policy at the University of Maine, under a contract with the Bureau of Highway Safety, Department of Public Safety of the State of Maine. The field observation, data processing and preparation of this report were conducted by the Muskie Institute, while the Smith Center provided research design, sampling and analysis expertise.

***Four-leg intersections as primary observation sites.*** Observations were recorded from two vantage points at each of forty full-signalled intersections, which were selected using a standard unbiased sampling procedure, supplemented by an additional sample of twenty rural intersections with stop signs, but without full sets of lights. The sampling design was developed consistent with National Highway Traffic Safety Administration (NHTSA) guidelines supplied by the Maine Bureau of Highway Safety. In all, observations of 12,427 passenger vehicles and the restraint use or nonuse of 20,608

occupants were recorded, approximately 19% more occupants than were done in 1995.

### **INTERSECTION OBSERVATION STUDY FINDINGS**

***Overview: Compliance with the law.*** Restraint use increased significantly from 1995 to 1997. By virtually every measure (age, gender, location, type of vehicle, etc.), use rates have consistently improved over 1995. The data gathered in the intersection observation study indicate substantial, but by no means universal, compliance with the law requiring child restraint devices for children aged three and under. The law requiring safety belts for children aged four through eighteen is less frequently observed, with only 69% of the children observed to be properly restrained. Even fewer adults wear safety belts.

#### **Adults aged nineteen and over**

Almost all occupants of passenger vehicles are now required to wear safety belts (there are a few exemptions). Over half (59%) of persons aged nineteen and over wore a safety belt in 1997, up from 47% in 1995 and 33% in 1991. Adult men are still less likely to wear safety belts than adult women.

#### **Children and youth**

***Children aged fifteen through eighteen.*** Although Maine law has required fifteen to eighteen year olds to use appropriate safety restraints since 1991, those in their mid to late teens continue to have the next to the lowest safety belt use rate of any age group.

As in 1995, the use rate for this age group is almost identical to that of persons aged nineteen and older. Like the older group, the fifteen to eighteen year olds showed considerably higher usage in 1997, going from 48% to 58% over the two year period.

In the fifteen through eighteen age group, females are more likely to use their safety belts than males, especially when they are driving: 64% of the female drivers use their safety belts, but only 47% of the males, up from 54% and 42%, respectively, in 1995. As passengers, females' use rate in this age group is 66%, while that of the males is 52%.



## ***Safety Belt Use in Maine, 1997***

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***Children aged eleven through fourteen.*** The percentage of eleven through fourteen year old children wearing safety belts -- 73% -- has increased substantially since 1991, when only 29% were properly restrained. More children in this age group are seated in the right front (passenger) seat than any other position, and are, therefore, quite vulnerable to injury in a crash.

The eleven through fourteen age group is important because it is they who will be driving in a few years, and who may be in a position to influence the use of safety belts by persons who are passengers in their vehicles. This group has been and should continue to be a target for safety belt education efforts in the middle schools, junior highs, and high schools.

***Children aged four through ten.*** Compliance with the "buckle up" requirement is higher among children estimated to be aged four through ten than among those aged eleven through fourteen. Over three-quarters (77%) of the four through ten year-olds wear their safety belts.

Safety belt use rates among elementary school aged children have increased dramatically since 1991, from about five in ten children to nearly eight in ten now. However, the use rate for these children appears to have declined slightly from the rates at which their age cohorts were secured in child restraint devices in the prior studies. While safely restrained as very young children, apparently some of these elementary school aged children have been allowed to lapse into unsafe practices just as they are reaching the age at which they are able to buckle themselves in on their own initiative.

***Toddlers aged one through three.*** The law now requires children aged one through three years to be properly buckled in a CRD, whether or not they are traveling with their parents or legal guardians. (The law in 1991 allowed an exception for children traveling with persons who were not their parents or legal guardians and a CRD was not available, in which case they were to be properly secured by a seat belt, if one were available.)

As with the entire "under four" age group, a high proportion (90%) of children aged one through three are properly restrained in CRDs, an increase from 78% in 1991 and 84% in 1995.

Very few of the observed children in this age group were totally without restraint. A small number were held in the lap of another person, and about ten children were

## ***Safety Belt Use in Maine, 1997***

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incorrectly secured in CRDs.

***Infants in their first year of age.*** Almost all (92%) of these infants were found to be in CRDs, but 14% of those in CRDs were not correctly placed. Most frequently the incorrect placement meant that the devices were not facing backward, which is the safest position for infants.

### **Passengers' use of safety belts related to use by driver**

As in the earlier studies, buckling up is a friend-and-family affair. When drivers wear their safety belts, the other occupants of the vehicle (who are most likely family and friends of the driver) are nearly three times more likely to be appropriately restrained than they are when the driver is not wearing a seat belt. In addition, the presence of a passenger in the middle front position in the front seat, which is often not a true seating position or a particularly safe one, is associated with nonbelted drivers.

### **Comparison with other geographic areas**

Maine's safety belt use relative to other states has improved modestly since 1995.<sup>3</sup> As of December 1995, Maine's use rate was 50%, the fifth lowest from the bottom of a list of all fifty states, the District of Columbia, and Puerto Rico. Maine's rate surpassed only those of Mississippi (46%), Oklahoma (46%), North Dakota (42%), and South Dakota (40%). By 1997, Maine's use rate had risen to number thirty-five on the list.

### **Driver Restraint Use by Site and Vehicle Characteristics**

***In-state and out-of-state vehicle registration.*** Drivers of Maine-registered vehicles have lower safety belt use rates than those observed for any out-of-staters. The driver safety belt use rate for Maine passenger vehicles is 57%, compared to a high of 82% for drivers of vehicles with Canadian registration (where each province has its own belt use law); 68% for drivers of other (non-Maine) New England vehicles; 81% for vehicles registered in New York, New Jersey, and Pennsylvania; and 71% for other states in the United States. We stress that the observed use rates for vehicles with out-of-state plates is reported here for information purposes only. There weren't enough observations of any other states to be able to make conclusive comparisons between Maine and any other state.

***Size and type of vehicle.*** It is likely that selection of a vehicle and the propensity

## ***Safety Belt Use in Maine, 1997***

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to buckle up or not are both related to age, lifestyle, and personality characteristics. The drivers with the highest rates of safety belt use are those who are driving station wagons: 68% of them are buckled up. Drivers of economy cars are next, with 67% wearing seat belts. Drivers of vans have a 65% use rate. Sixty-two percent of drivers of intermediate sized cars are belted, and 60% of drivers of jeep-type sport utility vehicles use their belts.

Drivers of sports and GT-type cars wear safety belts less often: 52% of them are buckled up. Least likely to wear safety belts are the drivers of pickup trucks: only 36% of these drivers comply with the law.

Use rates have improved for drivers of all types of vehicles. With the exception of station wagons, where rates have increased 9%, use rates for each type of vehicle have increased by 12-15%.

***Helmet use by motorcycle riders.*** Although helmet use was not a specific focus of this study, the opportunity was taken to observe the use or non-use of helmets by persons operating and riding on the 158 motorcycles that stopped before the observers. Helmet use has hardly changed at all since 1995: 48% of the motorcycle operators are helmeted (up from 45%), as are 39% of their passengers statewide (down from 44%).

### **Summary**

Safety restraint use rates in Maine for all ages increased from 36% in 1991 to 50% in 1995 to 61% in 1997. The latest study was conducted in the summer of 1997, a year and a half after the new law took effect. Because there was little change in Maine's safety belt education programs between 1995 and 1997, it is likely that most of the increase is a result of the impact of the new law.

Safety belt use among adults has increased markedly during this time, rising from 33% among those aged sixteen and over in 1991 to 59% among those nineteen and over in 1997 (it should be noted that these are not entirely comparable figures due to the different age groupings used in the 1991 study).

Infants and young children are much more likely to be secured in restraint devices or to wear safety belts than are older children. As high a proportion as 92% of infants are in child restraint devices (although some are improperly restrained), and nearly eight in ten elementary school-age children are wearing safety belts. From that age, however,

## ***Safety Belt Use in Maine, 1997***

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usage declines, such that fewer than two-thirds (63%) of teenagers wear safety belts. Their usage rates are only slightly higher than those of adults of all ages.

All of these figures represent markedly higher levels of compliance with Maine's safety belt requirements. Before the implementation of the mandatory use law, Maine ranked among the lowest 10% of states in terms of compliance with safe practice. While this ranking of states depends as much on the activities of the other states as upon what is done in Maine, it appears from the NHTSA data and the observations in Maine that most out-of-staters still use their safety belts more often than people from Maine. With the implementation of the new law, however, Maine is now closing the gap.

Portland, Maine

March 25, 1998

## **INTRODUCTION**

Three out of every five persons who die in vehicle crashes would have survived if they had been wearing their safety belts. Average hospitalization costs are nearly \$5,000 less for persons injured in crashes and hospitalized, if they were wearing their safety belts at the time of the crash. Nationally, about 67% of motorists use their safety belts.<sup>4</sup>

In the absence of a mandatory use law for adults until early 1996, the rate at which motorists in Maine have worn their safety belts has been about half the national rate.<sup>5</sup> In November 1995, Maine voters narrowly approved a referendum question establishing a secondary enforcement law requiring all persons to wear safety belts, or, in the case of children and infants, be appropriately placed in child restraint devices (CRDs). The study reported here is an observation study of safety belts and child restraint device use conducted in late summer 1997, less than two years after the new law had been implemented. Comparisons of these 1997 data with the 1995 findings provide the Bureau of Highway Safety with the primary measure of the effect of changes in the law, by showing the extent to which use rates have changed following implementation of the new law.

The research project was conducted jointly by the Survey Research Center of the Edmund S. Muskie School of Public Service at the University of Southern Maine and the Margaret Chase Smith Center for Public Policy at the University of Maine, under a contract with the Bureau of Highway Safety, Department of Public Safety of the State of Maine. The field observation, data processing, and preparation of this report were conducted by the Muskie School, while the Smith Center provided research design, sampling and analysis expertise.

The study was designed to determine the rate of safety restraint use in Maine as part of the development of an annual statewide comprehensive highway safety plan as required by the National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration (FHWA) pursuant to the Federal Highway Safety Act of 1966. It replicates the 1995 study in order to best measure the impact of the 1996 law

## ***Safety Belt Use in Maine, 1997***

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making the use of proper restraints mandatory for all occupants of all passenger vehicles in the state. In both years, the field work took place during the last three weeks of August. Observations were conducted at the same intersections, on the same day of the week, at the same time of day, and frequently, by the same observer, in order to control for as much potential variance as possible.



## **METHODOLOGY**

*Selection of four-leg intersections as primary observation sites.* Observation sites must afford opportunity for a reasonably representative flow of multi-purpose traffic, while allowing observers a safe viewing position as well as a clear vantage point in front of which vehicles pass slowly enough to permit careful observation and recording of a number of characteristics of the vehicles and all their occupants. For these reasons, full-signalled four-leg intersections, at which there is a red, yellow, and green traffic light at a crossroads where traffic comes to a full stop, were selected as the primary observation sites. In addition, a smaller number of rural non-signalized sites were designated to assure inclusion of non-congested travel.

At the full-signalled four-leg traffic sites, travel is likely to represent varied origins and destinations; is relatively heavier (which probably originally prompted the installation of the full set of signal lights); and the flow of traffic periodically comes to a full stop, usually allowing a clear view of occupants and time to record observations of multiple vehicles. Full-signalled intersections are also likely to have sidewalks, traffic islands, or other safe and raised surfaces from which observers may look down into vehicles.

At each of the forty primary observation sites selected, two observation points were established, so that two observers could record data about traffic flowing to the stop signal from two different directions (that is, so that they would not be observing the same vehicles).

Observers were instructed to start their observations with the second vehicle in line at the signal light, on the assumption that stopping for or running red lights is behavior that may be related to restraint use because it involves reluctance or willingness to take risks. Observers were to record data concerning as many passenger (non-commercial) vehicles as possible during the time the traffic was stopped for the light.

***Supplementary selection of rural intersections.*** In addition to the forty sites described above, observations were made from a selection of rural four-leg non-signalized intersections to assure inclusion of travel with more rural origins and destinations, and to assure appropriate representation of vehicles in counties with few full-signalized intersections. One thousand one hundred thirty-one vehicles and their occupants were observed at twenty rural non-signalized intersections.

***Sampling.*** This study replicated the 1995 project, thus the intersections included in 1997 were the same as those selected in 1995. The 1995 sampling design was developed consistent with National Highway Traffic Safety Administration (NHTSA) guidelines supplied by the Maine Bureau of Highway Safety.

Maine's sixteen counties were divided into two strata, urban and rural, such that the urban stratum was comprised of the five counties with the greatest population and the greatest density of traffic flow as measured by the number of vehicles entering four-way signalized intersections. Cumberland, York, Kennebec, Androscoggin, and Penobscot Counties comprised the urban stratum, which contains 63% of Maine's population (based on July, 1995 population estimates) and 88% of the traffic volume in four-way signalized intersections. The remaining eleven counties were designated as rural.

Twenty four-way full-stop signalized intersections were then selected from each stratum with probability proportional to the traffic volume measured in thousands of vehicles entering each intersection, according to Maine Department of Transportation (MDOT) data.

In the rural stratum, Franklin, Piscataquis, Lincoln, and Waldo Counties had only one eligible intersection each: these intersections were automatically included. Washington County had only two intersections with full signals; one of these was selected with probability of selection proportional to the number of entering vehicles. The remaining rural stratum four-way signalized intersections were selected with probability proportional to the number of entering vehicles from the MDOT list of such intersections in the remaining rural stratum counties.

To ensure representation of travel with rural origin or destination, twenty

additional intersections were selected from a MDOT listing of four-leg rural intersections with varying but known and representative volumes of traffic and with some means of traffic control other than a full-signalized traffic light; most commonly, a stop sign. From each county one such non-signalized intersection was selected, with equal probability of selection to provide appropriate likelihood of selection of low-volume intersections. The four counties with only two intersections selected (the sole signalized intersection and one non-signalized intersection) were then allocated one additional non-signalized intersection site each.

Observations were conducted from two vantage points at each of the forty signalized intersections, and from one point at the twenty non-signalized intersections, for a total of one hundred observation points. In all, observations of 12,427 passenger vehicles and the restraint use or nonuse of 20,608 occupants were recorded. A list of the towns and cities in which observations were made appears as Table 23.

***Weighting.*** Consistent with NHTSA guidelines, the data were weighted to reflect the stratified sampling design and the average daily traffic volume measured in thousands of entering vehicles at the selected intersections. Data weighted by both design elements are used in the presentation of statewide study findings.

One effect of the weighting is to produce results reported in fractions of observations. The weights are decimal rather than integer weights, and the fractional observations are the result of multiplying a simple observation count by the decimal weight. In the tables in this report, the decimal frequencies have all been rounded, as have the percentages reflecting the weighted data. The unavoidable effects of proportionately weighted data are that results for subsets of data may not always sum precisely to totals presented elsewhere, and rounded percentages do not always sum exactly to 100% nor always translate directly into whole numbers of observations.

***Observation times and days.*** Given the selection of forty intersections with two vantage points and twenty intersections with one, observations were made at one hundred locations throughout the state for ninety 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. Observations were recorded for a total of 150 hours.

The observation assignments were allocated across a schedule of time slots that began at 7:00 a.m. and ended at 7:00 p.m. on each of the seven days of the week. Observations were conducted from August 7 through August 29, 1997.

***Observer training.*** Observers were trained using a study-specific training manual written for this project by the Margaret Chase Smith Center and the Edmund S. Muskie Institute's Survey Research Center, based upon a manual developed by the National Highway Traffic Safety Administration,<sup>6</sup> upon materials from the Transportation Research Institute at the University of Michigan<sup>7</sup> and the manual produced by the Muskie Institute for the 1991 observation study. The observers were trained to recognize vehicle types and sizes as well as driver and passenger gender, age group and restraint type. The training involved not only use of the written materials and oral presentation, but also demonstrations, slides and field practice.

## **INTERSECTION OBSERVATION STUDY FINDINGS**

### **Restraint Use by Age and Gender**

***Contents of this section.*** This section of the report contains descriptions of the restraint use behavior of male and female adults and children of several age groups, as well as the variations in use of safety restraints by persons in various seating positions in the vehicles.

Where possible and appropriate, comparisons are made to the restraint use rates of similar demographic groups in the 1991 and 1995 studies. Those comparisons can address questions about changes in use rates that may have been prompted by changes in the law, by educational efforts targeted to specific age groups, or by the risk-taking behaviors characteristic of particular age groups.

***Comparing age group-specific use rates with results of prior studies.*** These data may be used to suggest whether the safety restraint use behaviors of children endure as

## ***Safety Belt Use in Maine, 1997***

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the children age. With data from three successive observation studies conducted in 1991, 1995 and 1997, we can roughly compare the use rates of children in the later studies with the use rates for the age group to which they belonged in earlier studies. For example, use rates of children in the four to ten year old age group in 1995 may be compared to the use rates for children aged four years younger -- birth to three -- in 1991. Because observers recorded only the estimated age *group* of vehicle occupants, not a specific year of age, these comparisons are, of course, not exact. However, they can begin to help in understanding the relationship of early childhood behavior and later behavior.

There are at least two logical explanations for differences in behavior exhibited by different age groups at one point in time. One is that there are differences in "generations." For example, today's junior high school students may be different from those of several years ago. The second is that behavior may change throughout one's life cycle; for example, a teenager may not think or behave in the same way as s/he did in late elementary school. These data cannot indicate which of these explanations is "correct" in describing age group differences. However, because they are collected at two points in time, the data can suggest whether members of an age group use safety restraints at a higher rate than would have been expected if only generational change were operating; that is, if they have simply carried with them the behavior learned at the earlier age. In addition, knowing that use rates may decline at certain ages may help educators plan messages and curricula to reinforce earlier behavior or anticipate later behavior.

***Overview: Compliance with the law.*** The data gathered in the intersection observation study indicate substantial, but by no means universal, compliance with the law requiring child restraint devices for children aged three and under. The law requiring safety belts for children aged four through eighteen is less frequently observed, with only 69% of the children observed to be properly restrained. Even fewer adults wear safety belts. However, safety belt use rates have increased for each age group since 1995. Figure 1 presents a summary of rates of appropriate use.

**Figure 1**  
**1997 Maine Safety Belt Use Observation Study**  
 Summary, restraint use and non-use  
 Number of observations and percent of use and non-use, by age group

<b>Number of observations</b>						
Presence/absence of restraint; restraint type						
Age (Est.)	Lap/ shoulder belt	CRD: correct	CRD: incorrect	In lap of another	No restraint	Total
<1	0	<b>59</b>	10	2	4	75
1-3	7	<b>414</b>	32	4	10	468
4-10	<b>851</b>	<b>68</b>	12	4	261	1,195
11-14	<b>452</b>	0	0	1	167	619
15-18	<b>695</b>	0	0	0	503	1,198
19+	<b>9,797</b>	0	0	0	6,821	16,619
TOTAL	<b>11,801</b>	<b>540</b>	54	11	7,766	20,173

<b>Percentages</b>							
Presence/absence of restraint; restraint type							
Age (Est.)	Lap/ shoulder belt	CRD: correct	CRD: incorrect	In lap of another	No restraint	Total (by age group)	Total Correct Use
<1	0%	<b>79%</b>	13%	3%	5%	100%	<b>79%</b>
1-3	2%	<b>88%</b>	7%	1%	2%	100%	<b>88%</b>
4-10	<b>71%</b>	<b>6%</b>	1%	*	22%	100%	<b>77%</b>
11-14	<b>73%</b>	0%	0%	*	27%	100%	<b>73%</b>
15-18	<b>58%</b>	0%	0%	0%	42%	100%	<b>58%</b>
19+	<b>59%</b>	0%	0%	0%	41%	100%	<b>59%</b>
TOTAL	<b>59%</b>	<b>3%</b>	*	*	39%	100%	<b>61%</b>

*Note:* Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages that sum to slightly more or less than exactly 100%.

Numbers in italics represent appropriate use.

\*Less than 1%, but not zero

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 January, 1998*



## ***Safety Belt Use in Maine, 1997***

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### **Adults aged nineteen and over**

Prior to the new law, persons aged nineteen and over were not required to wear safety belts. The law now applies to all adults. Over half (59%) of persons aged nineteen and over wore a safety belt in 1997 (Table 17), an increase from 47% in 1995 and only 33% in 1991.

Drivers aged nineteen and over are slightly less likely than their adult passengers to wear a belt (Table 2): while 59% of these drivers wear safety restraints, 60% of all adult passengers wear theirs. By seating position, 61% of right-front seat passengers are properly restrained; 54% of those in the seat immediately behind the driver wear belts; 45% of those in the middle back seat (which often either has no belt, or is not even a true seating position) wear them; 53% of those in the seat behind the front seat passenger do so; and at least one-third (38% to 44%) of those in additional rear seating, such as in vans, wear belts. Except for the additional rear seats, most of these safety belt use rates are markedly higher than the corresponding 1995 use rates. Rates for the additional rear seats appear to have declined, but there are so few of them (25) that the figures should be viewed with caution.

Adult men are less likely to wear safety belts than are adult women (Tables 3 and 4). Just over half of male drivers (52%) wear safety belts, while slightly over two-thirds (67%) of female drivers wear them. These rates have increased from 41% and 56%, respectively, since 1995. Slightly fewer than half of adult male right-front seat passengers wear a safety belt (48%). Nearly two-thirds of the adult female passengers (66%) in that seating position wear one, up from 35% and 56% two years ago.

Fifty-three percent of females in the seat immediately behind the driver, 62% of the adult females in the seat behind the front seat passenger, and 46% of those in the back middle seat wear them.

### **Children and youth**

*Children aged four through eighteen.* Like all other passengers, children aged four through eighteen at the time the observations were made (late summer 1997) were

## ***Safety Belt Use in Maine, 1997***

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required by Maine law to wear safety belts.

In this study, the observers were asked to distinguish within this age group between children aged four through ten, preteens and teens aged eleven through fourteen, and older teenagers aged fifteen through eighteen. The observation results for children in these age groups are discussed below.

***Children aged four through ten.*** Compliance with the "buckle up" requirement is higher among children estimated to be aged four through ten than among those aged eleven through fourteen. Over three-quarters (77%) of the four through ten year-olds wear their safety belts, or their child safety seats or booster seats for the youngest in this age group (Table 17). A tiny number are incorrectly restrained in CRDs. Incorrect installation for this age group is most likely to involve not being buckled into the CRD.

Thirty percent of the children aged four through ten are seated in the right front passenger seat (Table 11). Belt use rates are very high (80%) for this age group at this seating position, and are quite uniform across all seating positions except the middle front (53% are wearing belts there), and the middle back where 62% are wearing belts.

***Children aged eleven through fourteen.*** The percentage of eleven through fourteen year old children wearing safety belts -- 73% -- is more than twice what it was in 1991, when only 29% were properly restrained. (The comparable age group in the 1991 study was eleven through fifteen years, not fourteen.) In 1995, 65% of eleven through fourteen year olds were properly restrained.

More children in this age group are seated in the right front (passenger) seat than any other position, and are, therefore, quite vulnerable to injury in a crash (see Table 13).

Seventy-eight percent of the children in the eleven through fourteen age group in the right front passenger seat are wearing seat belts. Seat belt use among this group is relatively uniform across most seating positions, except for the middle front position, where safety belts are often not available, or are not convenient. Sixty-eight percent of the eleven through fourteen year-olds in the seat immediately behind the driver are wearing belts; 67% of those in the middle back seat; and 74% of those in the seat behind the front passenger are wearing safety belts.

## ***Safety Belt Use in Maine, 1997***

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The eleven through fourteen age group is important because it is they who will be driving in a few years, and who may be in a position to influence the use of safety belts by persons who are passengers in their vehicles. This group has been and should continue to be a target for safety belt education efforts in the middle schools, junior highs and high schools. Cohort analysis from the 1991 and 1995 data suggests that some preteens and early teenagers who had not used safety restraints as younger children were using them as eleven to fourteen year olds. While we still can not state conclusively, it appears that this trend is continuing.

***Children aged fifteen through eighteen.*** Although their overall use rate has increased from 48% in 1995 to 58% in 1997, those in their mid to late teens still have the lowest safety belt use rate of any age group. In both years, use rates for those in their late teens were almost identical to those of people aged nineteen and over.

In the fifteen through eighteen age group, females are more likely to use their safety belts than males, especially when they are driving: 64% of the female drivers use their safety belts, but only 47% of the males do so (Tables 15 and 16). As right front seat passengers, females' use rate in this age group is 63%, while that of the males is 49%. Female drivers show a much greater increase from 1995, when females were at 54% and males were at 42%.

***Summary: Children aged four through fourteen.*** Safety belt use rates among elementary school aged children have increased dramatically since 1991, from about five in ten children to almost eight in ten. Over three-quarters (78%) of the children in this age group wear safety belts or are properly buckled in restraint devices when riding in the right front, or left or right side of the back seat. Only when they are in the center seating positions is their restraint device use lower: 53% in the front center seat and 63% in the center back (Table 12).

***Children from birth through three years.*** Compliance with the law and with good practice in restraining their children is high among parents of children in this age group. These infants and toddlers are required to be in child restraint devices, and about 88% of them are apparently properly restrained (Table 17). Another 8% are in CRDs, but

## ***Safety Belt Use in Maine, 1997***

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not properly so. Common improper uses of a CRD included not having children belted in, or not having the CRD attached to the car seat. In addition, some CRDs were placed sideways in the seat, and some were held by another person.

In 1991, 78% of children from birth through three were properly riding in CRDs, and 7% were improperly buckled in CRDs. By 1995, these rates had increased to 82% and 8%.

***Infants in their first year of age.*** Almost all (92%, the same as in 1995) of these infants were found to be in CRDs. It should be pointed out, however, that of the infants who were observed to be in CRDs, 14% were not correctly placed (Tables 8 and 17). This is an improvement over 1995, when 19% were incorrectly placed. Most frequently the incorrect placement meant that the devices were not facing backward, which is the safest position for infants.

***Toddlers aged one through three.*** The law requires children aged one through three years to be properly restrained in a CRD, whether or not they are travelling with their parents or legal guardians. (The law in 1991 allowed an exception for children travelling with persons who were not their parents or legal guardians and a CRD was not available, in which case they were to be properly secured by a seat belt, if one was available.)

As with the entire "under four" age group, a high proportion (88%) of children aged one through three are properly restrained in CRDs (see Table 17 and Figure 1), an increase from 78% in 1991 and 84% in 1995. A very small number of children in this age group are held in the lap of another person, and thirty-two children are incorrectly secured in CRDs (see Figure 1).

Children aged one through three years are more likely to be placed in the middle back seat than in any other location (see Table 10). Good practice suggests that in the event of a crash the back seat of a car is a safer place for an infant or toddler than the front seat.

Of no minor concern is the number, albeit small (24), of toddlers riding in the middle position of the front seat without proper restraint. These children are at risk for

## ***Safety Belt Use in Maine, 1997***

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severe injury in a crash because protuberances such as the gear shift, the steering wheel, the knobs on the dashboard and radio, and the lower part of the dashboard itself (which is usually not as thickly padded as the top edge) are all at head, face, and neck level for a small child.

### **Passengers' use of safety belts related to use by driver**

As in the 1991 and 1995 studies, buckling up is a friend-and-family affair. When drivers wear their safety belts, the other occupants of the vehicle (who are most likely family and friends of the driver) are two to three times more likely to be appropriately restrained than they are when the driver is not wearing a seat belt (Table 21). In addition, the presence of a passenger in the middle front position in the front seat, which is often not a true seating position or a particularly safe one, is associated with nonbelted drivers.

### **Comparison with other geographic areas**

While safety belt use in Maine has increased since 1995, it still ranks only in the middle of all the states (see Table 22).<sup>8</sup> As of December 1995, Maine's use rate was 50%, fifth lowest from the bottom of a list of all fifty states, the District of Columbia, and Puerto Rico. By 1997, Maine's use rate had risen to number thirty-five on the list.

### **Comparison of 1997 with 1986, 1991 and 1995 Maine data**

Three earlier studies in Maine have been conducted for the Bureau of Highway Safety of the Maine Department of Public Safety. The first was completed by Northeast Research for the School of Public Health of the Boston University Medical School,<sup>9</sup> and the two more recent studies, by the Edmund S. Muskie School of Public Service at the University of Southern Maine.<sup>10</sup>

The 1986 study, which was conducted during February of that year, involved observation of occupant safety restraint use in vehicles at intersections, toll plazas, and ramps on controlled-access highways in Maine. Detailed comparisons of the data described here with the 1986 study are not readily made because of the difference in the season of the year in which the two studies were conducted, the differences in the types of

## ***Safety Belt Use in Maine, 1997***

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intersections studied, and the differing categories used to record the age of the vehicle occupants. It should also be considered that in 1986 it was no doubt more difficult to observe safety belt usage because there were more older vehicles on the road without the more readily observable shoulder belts, and because the study was conducted in the winter when bulky clothing may have concealed lap belts. However, some general comparisons may be made.

In 1991, a second observational study of safety belt and child restraint device use was conducted. That study involved observation of 10,517 passenger vehicles, 159 motorcycles, and 14,735 persons from two vantage points at each of forty four-way stop intersections in Maine. The intersections were selected randomly with probability of selection proportional to traffic volume in urban and rural sampling strata. The sampling, observer training, observation methods, and information collected in the 1991 study are replicated in the 1995 and 1997 studies with only minor changes. The 1991 study also included a close observation and interview component focusing on proper installation and use of child restraint devices. That portion of the 1991 study was not replicated in 1995 or 1997.

In the 1986 study the youngest age grouping recorded was children from birth through five years of age. In that age group, 55% were observed to be using seat belts when they were in the front seat of a vehicle. There is no explicit mention of child restraint devices, although one would assume that a child in a child restraint device would have been counted as a child using a safety belt. In the same study, 71% of the children through five years of age riding in the back seat were using seat belts. (Note: The 1986 study included observations of vehicles entering the Maine Turnpike. Observations from those vehicles are not included in this report because subsequent studies have not included any Turnpike observations.)

In the 1991 study, 81% of all children through age three were wearing lap belts, lap and shoulder belts, or were correctly secured in child restraint devices. A slightly higher percentage of the children in the back seat were properly restrained than the percentage properly restrained in the front seat.



## ***Safety Belt Use in Maine, 1997***

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In 1995, 82% of children through age three were properly restrained, and children in the back seat were slightly more likely to be properly restrained than those in the front. By 1997, 88% of children through age three were correctly restrained; children in the back seat were much more likely to be properly restrained than those in the front. It may be that parents who make children buckle up are more likely than those who ignore restraints to place their children in safer seating positions. The 1997 results show this to be an area of some considerable success. In 1995, 70% of all children in this age group were seated in the back seat, which is generally a safer position than the front seat. In 1997, the number had increased to 82%.

In 1986, 23% of children aged six through fifteen years in the front seat not on the freeway were using seat belts, and 17% of the children in that age group in the back seat were using seat belts. In the 1991 study, 45% of all children aged four through fifteen (51% of those aged four through ten and 29% of those aged eleven through fifteen) wore safety belts.

In 1995, 70% of all children aged four through fourteen (72% of those aged four through ten and 65% of those eleven through fourteen) were properly restrained, a considerable increase over the 1991 figures. Use rates increased further in the 1997 study, with 76% of the four through fourteen year olds properly restrained (77% of the four through ten year olds and 73% of those eleven through fourteen).

Adult use of safety belts has similarly increased. In the 1986 study, 21% of drivers aged sixteen and over in non-freeway conditions wore safety belts; in 1991, 35% did so; in 1995, 46% of drivers aged fifteen and over wore lap and shoulder belts; and in 1997, 59% did so (Table 5). In 1986, 17% of adult right front seat passengers wore belts; in 1991, 29% of right front seat passengers aged sixteen and over wore them; in 1995, 51% of those fifteen and over in the passenger seat did so; and in 1997, 61% wore them. In 1986, 8% of adults seated in the rear used seat belts; in 1991, 13% did so; in 1995, 47% of those fifteen and over wore their safety belts in the back seat; and in 1997, 57% used them.

***Summary: Change from 1986 to 1997.*** A graphic representation of the change

## ***Safety Belt Use in Maine, 1997***

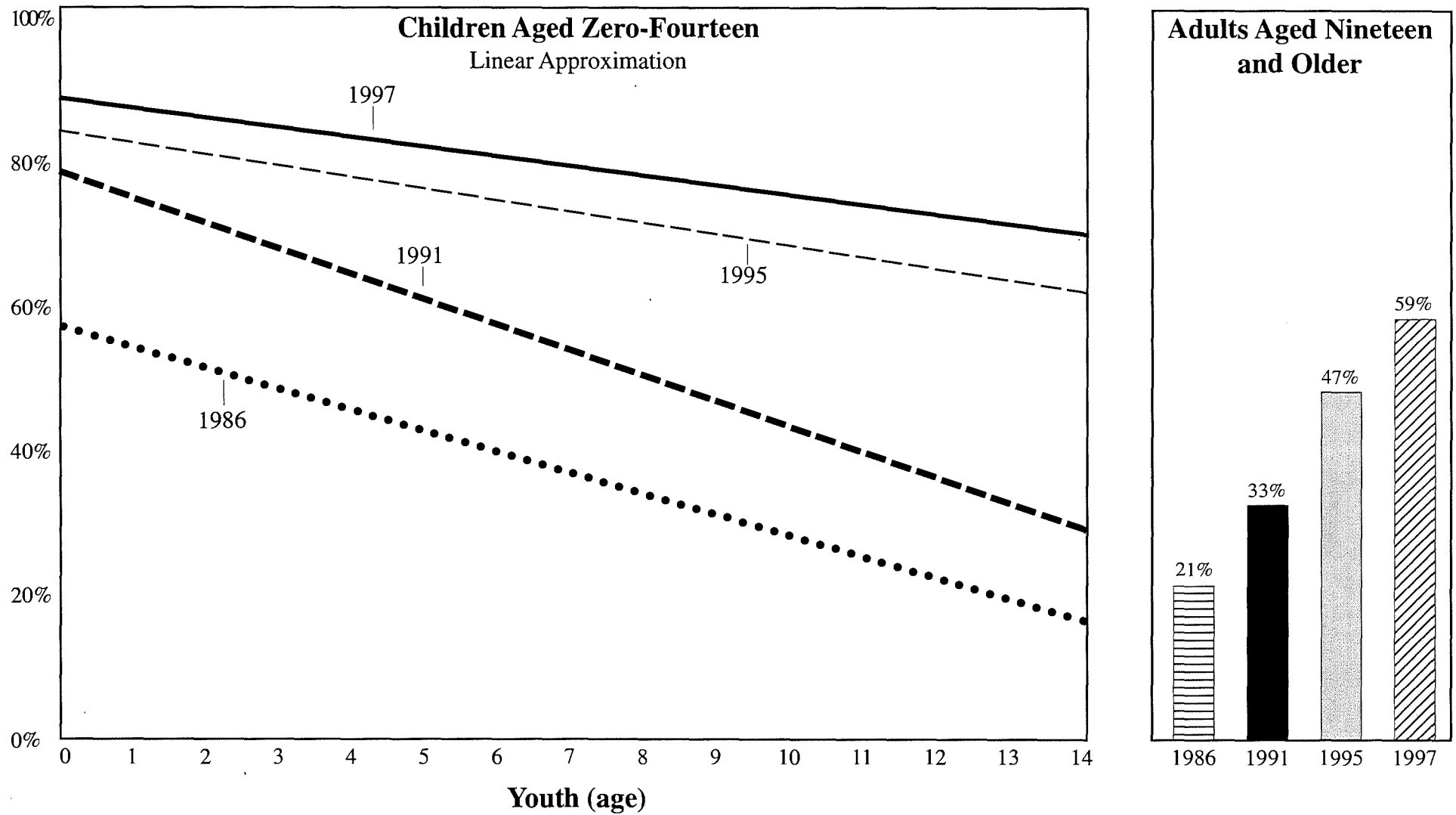
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in rates of safety restraint use observed in the 1986, 1991, 1995, and 1997 studies is shown in Figure 2. The lines in the graph are the "best fit" lines drawn through a set of points representing the proportion of persons of various estimated ages who are properly restrained. Because observers recorded their observations of age according to age ranges, not single years of age, it was necessary to estimate mathematically the rates of use for the individual years of age. Therefore, this chart cannot be interpreted as displaying the observed use rate for persons of a specific year of age. Rather, it shows how use declines as children's age increases. The rates of adult use for each of the study years are shown for comparison.

Using the graph in Figure 2, one can see that between 1986 and 1991 the change in use rates was greater among the youngest age groups, while between 1991 and 1997 the greatest change occurred among older children. It is also clear that children are increasingly learning to use safety restraints: the use rates for children who are in their teens in 1997 are higher than the use rates eleven years ago for the toddlers and preschoolers -- the age group to which most of them belonged in 1986.

The changes in restraint use from 1986 through 1997 are all in the direction of increased use of safety restraints, for children and adults, with a marked increase in the more recent years. These differences are consistent with changes in the law concerning safety restraints for children, and with continued educational efforts.

*Figure 2*  
Restraint Use  
Children Aged Zero-Fourteen and Adults Aged Nineteen and Older



**Driver Restraint Use by Site and Vehicle Characteristics**

In this portion of the report, only the driver's use of safety belts will be examined in detail. As described in the text above, the driver's use or non-use of a safety belt is strongly related to the use or non-use of restraints by others in the vehicle.

***In-state and out-of-state vehicle registration.*** The observations were conducted in the month before Labor Day, and therefore included summer tourist traffic. Even in late summer, 88% of the observed vehicles were from Maine. The other five New England states accounted for 5% of the vehicles; New York, New Jersey and Pennsylvania (as a group) for 2%; other states, 4%; and Canada, 1%. These percentages are almost identical to the 1995 figures.

The out-of-state vehicle data suggest some interesting findings, even though the number of observations from other states is relatively small (see Table 18). Drivers of Maine-registered vehicles have lower safety belt use rates than any out-of-staters. The driver safety belt use rate for Maine passenger vehicles is 57%, compared to a high of 82% for drivers of vehicles with Canadian registration (where each province has its own belt use law); 68% for drivers of other (non-Maine) New England vehicles; 81% for vehicles registered in New York, New Jersey, and Pennsylvania; and 71% for vehicles from other states in the United States. These numbers have shifted slightly from 1995, when Canadian vehicles showed a use rate of 87%, other New England vehicles were 64%, New York, New Jersey and Pennsylvania were 78% and vehicles from other states were at 71%.

***Size and type of vehicle.*** There are some clear differences in driver safety belt use rates according to the type of vehicle the driver is operating (See Table 18). It is likely that selection of a vehicle and the propensity to buckle up or not are both related to age, lifestyle, and personality characteristics, so it is not surprising that these differences occur.

The drivers with the highest rates of safety belt use are those who are driving

## **Safety Belt Use in Maine, 1997**

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station wagons: 68% of them are buckled up. Drivers of economy cars are next, with 67% wearing seat belts. Drivers of vans are next at 65%, followed by intermediate sized vehicles, 62%, and jeep-type sport utility vehicles, with 60% using seat belts.

Drivers of sports and GT-type cars wear safety belts less often: 52% of them are buckled up. Least likely to wear safety belts are the drivers of pickup trucks: only 36% of these drivers comply with the law. The driver belt use rates in these two categories of vehicles, however, have shown the greatest increase from 1995, when 37% of GT/sports car drivers and 23% of pick-up truck drivers wore safety belts.

***Helmet use by motorcycle riders.*** Although helmet use was not a specific focus of this study, the opportunity was taken to observe the use or non-use of helmets by persons operating and riding on the 159 motorcycles that stopped before the observers. Helmets are used by motorcycle operators at a lower rate than adults wear safety belts: 48% of the motorcycle operators are helmeted (up from 45% in 1995), as are 39% of their passengers statewide (Table 19), a decline from the 44% observed in 1995.

Somewhat surprising differences are found between the urban and rural strata. In the more urban counties, 41% of the drivers wear helmets. In the more rural counties, 56% do so. This is a reversal of the 1995 findings, when rural drivers were less likely to use their helmets: 40% of urban drivers used helmets but only 33% of rural drivers used theirs. Helmet use by passengers has also shifted. In urban counties, 28% of the passengers wear helmets; in rural counties, 46% of passengers do so. The corresponding figures for 1995 were 43% and 45%, respectively. It should be noted, however, that there weren't very many motorcycles observed in either of the two years.

***Day of the week.*** Observations were conducted on all days of the week, and while there are variations in safety belt usage on the various days (Table 18), there is no readily explained pattern to the findings. The original assignment of days and times of observation to the sites was systematic and unbiased, and replicated in 1997, but the number of observations obtained on each day varied considerably because the traffic volume at the selected intersections varied. Use rates are marginally higher on Thursdays, as they were in 1995, and are consistent across other days except on Monday, when the

## ***Safety Belt Use in Maine, 1997***

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rate is much lower. This is the same pattern as was found in 1995.

***Time of day.*** Safety belt use varies throughout the day (Table 18). Fifty-one percent of drivers wear their safety belts during the morning rush hour and about 59% do so in the afternoon rush hour. It is likely that those drivers who wear their belts in the morning also wear them in the afternoon, although no duplicate observation of intersections was carried out to examine that possibility. The lowest periods of safety belt use are early morning (7:00 to 8:30 a.m.) and at lunch time (11:30 a.m. to 1:00 p.m.). The highest use rate occurs in early evening, when 62% of drivers are wearing their safety belts. Except for early morning and early evening, use rates are quite consistent across all times.

***Weather and road conditions.*** The weather cooperated with the study by not causing conditions so adverse that observations had to be rescheduled, but the researchers had actually hoped for moderately inclement weather to occur during a larger portion of the observation period so that more of the observations could be made under adverse conditions. The weather was rainy for only about 4% of the observations (Table 18). It is, therefore, not possible from these data to assess the effect of adverse weather on the likelihood of safety belt use.

***Urban and rural locations.*** As described earlier, the intersections were assigned to one of two sampling strata depending upon the county in which they are located. The urban stratum, comprised of the five counties with the greatest population and the greatest density of traffic flow as measured by the number of vehicles entering four-way signalized intersections, consists of Cumberland, York, Kennebec, Androscoggin, and Penobscot Counties. The remainder are designated as rural counties. Within stratum, the data are weighted by the Maine Department of Transportation's average daily traffic flow data. As shown in Table 20, there is little difference in safety restraint use between the two strata, even though the origin and destination of travel of vehicles in the two strata must reflect more densely populated areas in the urban stratum, and more sparsely populated areas in the rural stratum. This was the case in 1995 as well.

### **Summary**

Safety restraint use rates in Maine for all ages increased from 36% in 1991 to 50% in 1995 to 61% in 1997. Much of the most recent increase may be accounted for by the 1996 change in the law requiring safety belts for all vehicle occupants.

It is among adults that safety belt use has increased markedly from 33% among those aged sixteen and over in 1991 to 59% among those nineteen and over in 1997. It is important to note that these results were obtained in the summer of 1997, a year and a half after implementing the new law. It is not yet known if people will maintain this level of use.

Infants and young children are much more likely to be buckled in restraint devices or to wear safety belts than are older children. As high a proportion as 92% of infants are in child restraint devices (although some are not properly installed), and about eight in ten elementary school-age children are wearing safety belts. From that age, however, usage declines, such that 58% of teenagers wear safety belts. Their usage rates are very similar to those of adults of all ages.

Before the implementation of the mandatory use law, Maine ranked among the lowest 10% of states in terms of compliance with safe practice. While this ranking of states depends as much on the activities of the other states as upon what is done in Maine, it is clear even from the observations in Maine that out-of-staters use their safety belts at a higher rate than people from Maine. The change in the law has begun to move Maine up nearer to the middle of all the states. The longer-term effects of the law remain to be seen.

**ENDNOTES**

1. U. S. Department of Transportation, National Highway Traffic Safety Administration, *Three of five unbelted motorists in fatal crashes would have survived, study reports*, (press release 9-96), Feb. 15, 1996.
2. 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.
3. U.S. Department of Transportation, National Highway Traffic Safety Administration, *Observed Safety Belt Use Rates Reported by States as of February 1998*. (1998). Washington, DC: Author.
4. U. S. Department of Transportation, National Highway Traffic Safety Administration, *Three of five unbelted motorists in fatal crashes would have survived, study reports*, (press release 9-96), Feb. 15, 1996.
5. 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.
6. Peter N. Ziegler, *Guidelines for Observing Child Safety Seat Use*, U.S. Department of Transportation, National Highway Traffic Safety Administration, undated (DOT HS 807 128).
7. Alexander C. Wagenaar, Fredrick M. Streff, Lisa J. Molnar, Karen L. Businski, Robert H. Schultz, *Factors Related to Nonuse of Seatbelts in Michigan*, The University of Michigan Transportation Research Institute, Ann Arbor, 1987; and Alexander C. Wagenaar, Lisa J. Molnar, Karen L. Businski, Lewis H. Margolis, *Correlates of Child Restraint Use*, The University of Michigan Transportation Research Institute, Ann Arbor, 1986.
8. U.S. Department of Transportation, National Highway Traffic Safety Administration, *Observed Safety Belt Use Rates Reported by States as of February 1998*. (1998). Washington, DC: Author.
9. Deidre Hungerford, David Kovenock, and James Sorg, *Maine Seat Belt Use Observation Study, February 1986: Preliminary Summary*, Northeast Research, Orono, Maine, 1986.



## ***Safety Belt Use in Maine, 1997***

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10. 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.

## **Table of Tables**

## Table of Tables

### 1997 Maine Safety Belt Use Observation Study

Tables 1-16: Restraint use in passenger vehicles by seating position, statewide.

Table 1:	All ages
Table 2:	All persons aged nineteen and over
Table 3:	Males aged nineteen and over
Table 4:	Females aged nineteen and over
Table 5:	All persons aged fifteen and over
Table 6:	Males aged fifteen and over
Table 7:	Females aged fifteen and over
Table 8:	Infants less than one year old
Table 9:	Children from birth through three years
Table 10:	Toddlers aged one through three years
Table 11:	Children aged four through ten
Table 12:	Children aged four through fourteen
Table 13:	Children aged eleven through fourteen
Table 14:	All persons aged fifteen through eighteen
Table 15:	Males aged fifteen through eighteen
Table 16:	Females aged fifteen through eighteen
Table 17:	Restraint use by age (See also Figure 1 in report narrative)
Table 18:	Percent of drivers wearing safety belts under selected conditions: Vehicle registration (State groups, Canada) Day of the week Road conditions Weather Time of observation Size/type of vehicle
Table 19:	Motorcycle riders: Presence/absence of helmet by age, gender of driver and passenger
Table 20:	Restraint use, urban and rural counties
Table 21:	Driver belt use/nonuse and use/nonuse by passengers, by seating position
Table 22:	Observed safety belt use rates reported to NHTSA by states, March 1998
Table 23:	Locations of intersections at which observations were conducted

## Tables

TABLE 1

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

**Maine, 1997  
All Ages**

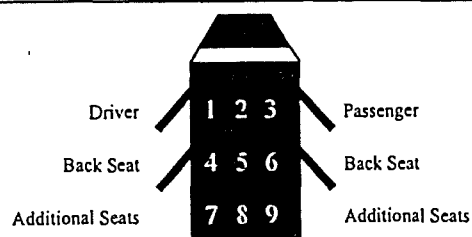
Lap/Shoulder <sup>a</sup> 59%	Lap/Shoulder <sup>a</sup> 31%	Lap/Shoulder <sup>a</sup> 62%
No Restraint 42%	CRD-Correct 17%	CRD-Correct 1%
	CRD-Incorrect 4%	CRD-Incorrect *
	In Lap <sup>b</sup> *	In Lap <sup>b</sup> 0%
	No Restraint 48%	No Restraint 37%
① N = 12,374	② N = 155	③ N = 5,186
Lap/Shoulder <sup>a</sup> 56%	Lap/Shoulder <sup>a</sup> 35%	Lap/Shoulder <sup>a</sup> 58%
CRD-Correct 15%	CRD-Correct 37%	CRD-Correct 14%
CRD-Incorrect 1%	CRD-Incorrect 4%	CRD-Incorrect 1%
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 2%	In Lap <sup>b</sup> *
No Restraint 28%	No Restraint 22%	No Restraint 27%
④ N = 916	⑤ N = 450	⑥ N = 945
Lap/Shoulder <sup>a</sup> 55%	Lap/Shoulder <sup>a</sup> 47%	Lap/Shoulder <sup>a</sup> 58%
CRD-Correct 16%	CRD-Correct 16%	CRD-Correct 14%
CRD-Incorrect 0%	CRD-Incorrect 3%	CRD-Incorrect 1%
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 3%	In Lap <sup>b</sup> 0%
No Restraint 29%	No Restraint 32%	No Restraint 26%
⑦ N = 64 **	⑧ N = 34 **	⑨ N = 64 **

Cells in table reflect seating position in the vehicle shown below.

*N* = 20,188 persons (weighted data)  
12,427 passenger vehicles (non-commercial, no motorcycles)

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt  
<sup>b</sup>In the lap of another person  
\*less than 1%, but not zero



**TABLE 2**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

Maine, 1997

*Persons Aged 19 and Over*

Lap/Shoulder <sup>a</sup> 59% No Restraint 41% ① N = 12,001	Lap/Shoulder <sup>a</sup> 25% No Restraint 75% ② N = 44**	Lap/Shoulder <sup>a</sup> 61% No Restraint 39% ③ N = 4,039
Lap/Shoulder <sup>a</sup> 54% No Restraint 46% ④ N = 206	Lap/Shoulder <sup>a</sup> 45% No Restraint 55% ⑤ N = 34**	Lap/Shoulder <sup>a</sup> 53% No Restraint 47% ⑥ N = 269
Lap/Shoulder <sup>a</sup> 44% No Restraint 57% ⑦ N = 12**	Lap/Shoulder <sup>a</sup> 38% No Restraint 62% ⑧ N = 3**	Lap/Shoulder <sup>a</sup> 38% No Restraint 62% ⑨ N = 10**

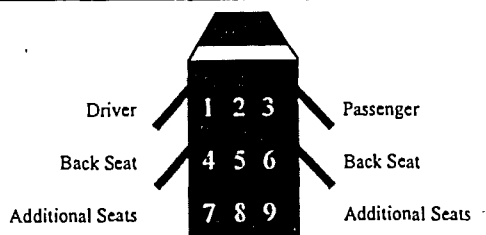
Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 3**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

Maine, 1997

*Males Aged 19 and Over*

Lap/Shoulder <sup>a</sup> 52% No Restraint 48%	Lap/Shoulder <sup>a</sup> 26% No Restraint 74%	Lap/Shoulder <sup>a</sup> 48% No Restraint 52%
① N = 6,951	② N = 11**	③ N = 1,074
Lap/Shoulder <sup>a</sup> 55% No Restraint 46%	Lap/Shoulder <sup>a</sup> 38% No Restraint 62%	Lap/Shoulder <sup>a</sup> 34% No Restraint 66%
④ N = 71	⑤ N = 3**	⑥ N = 87
Lap/Shoulder <sup>a</sup> 53% No Restraint 48%	Lap/Shoulder <sup>a</sup> 0% No Restraint 0%	Lap/Shoulder <sup>a</sup> 18% No Restraint 83%
⑦ N = 4**	⑧ N = 0	⑨ N = 5**

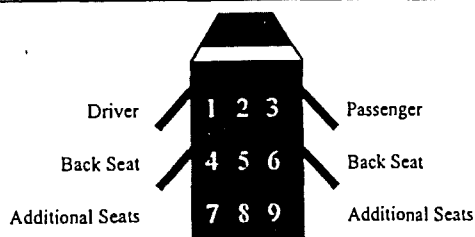
Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 4**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

**Maine, 1997**

*Females Aged 19 and Over*

Lap/Shoulder <sup>a</sup> 67% No Restraint 33% <b>①</b> N = 5,036	Lap/Shoulder <sup>a</sup> 24% No Restraint 76% <b>②</b> N = 33	Lap/Shoulder <sup>a</sup> 66% No Restraint 34% <b>③</b> N = 2,960
Lap/Shoulder <sup>a</sup> 53% No Restraint 47% <b>④</b> N = 135	Lap/Shoulder <sup>a</sup> 46% No Restraint 55% <b>⑤</b> N = 31**	Lap/Shoulder <sup>a</sup> 62% No Restraint 38% <b>⑥</b> N = 182
Lap/Shoulder <sup>a</sup> 39% No Restraint 61% <b>⑦</b> N = 8**	Lap/Shoulder <sup>a</sup> 38% No Restraint 62% <b>⑧</b> N = 3**	Lap/Shoulder <sup>a</sup> 58% No Restraint 42% <b>⑨</b> N = 5**

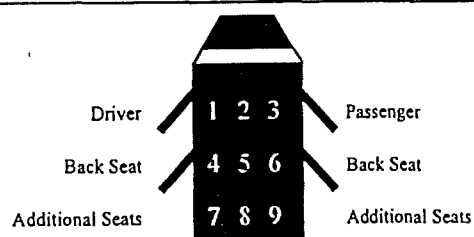
Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages





**TABLE 5**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

**Maine, 1997**

*Persons Aged 15 and Over*

Lap/Shoulder <sup>a</sup> 59% No Restraint 42% <b>①</b> N = 12,369	Lap/Shoulder <sup>a</sup> 26% No Restraint 75% <b>②</b> N = 58	Lap/Shoulder <sup>a</sup> 61% No Restraint 39% <b>③</b> N = 4,519
Lap/Shoulder <sup>a</sup> 57% No Restraint 43% <b>④</b> N = 336	Lap/Shoulder <sup>a</sup> 54% No Restraint 46% <b>⑤</b> N = 75	Lap/Shoulder <sup>a</sup> 58% No Restraint 42% <b>⑥</b> N = 411
Lap/Shoulder <sup>a</sup> 50% No Restraint 50% <b>⑦</b> N = 21**	Lap/Shoulder <sup>a</sup> 53% No Restraint 47% <b>⑧</b> N = 8**	Lap/Shoulder <sup>a</sup> 51% No Restraint 49% <b>⑨</b> N = 19**

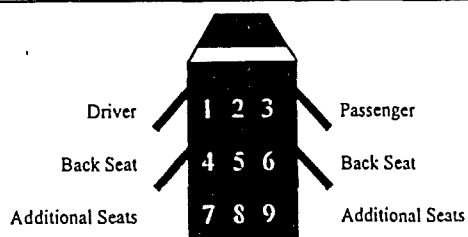
Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 6**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

**Maine, 1997**

***Males Aged 15 and Over***

Lap/Shoulder <sup>a</sup> 52%	Lap/Shoulder <sup>a</sup> 22%	Lap/Shoulder <sup>a</sup> 49%
No Restraint 48%	No Restraint 78%	No Restraint 52%
① N = 7,162	② N = 17**	③ N = 1,284
Lap/Shoulder <sup>a</sup> 54%	Lap/Shoulder <sup>a</sup> 45%	Lap/Shoulder <sup>a</sup> 46%
No Restraint 47%	No Restraint 55%	No Restraint 54%
④ N = 137	⑤ N = 15**	⑥ N = 152
Lap/Shoulder <sup>a</sup> 36%	Lap/Shoulder <sup>a</sup> 100%	Lap/Shoulder <sup>a</sup> 41%
No Restraint 64%	No Restraint 0%	No Restraint 59%
⑦ N = 6**	⑧ N = 1**	⑨ N = 7**

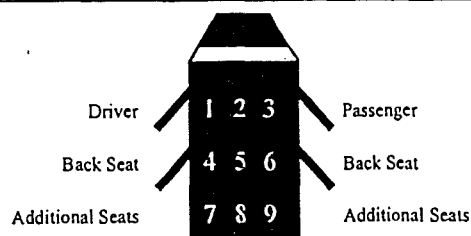
Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 7**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

**Maine, 1997**

***Females Aged 15 and Over***

Lap/Shoulder <sup>a</sup> 67%	Lap/Shoulder <sup>a</sup> 27%	Lap/Shoulder <sup>a</sup> 66%
No Restraint 33%	No Restraint 73%	No Restraint 34%
① N = 5,193	② N = 41	③ N = 3,230
Lap/Shoulder <sup>a</sup> 59%	Lap/Shoulder <sup>a</sup> 58%	Lap/Shoulder <sup>a</sup> 66%
No Restraint 41%	No Restraint 42%	No Restraint 35%
④ N = 199	⑤ N = 58	⑥ N = 259
Lap/Shoulder <sup>a</sup> 56%	Lap/Shoulder <sup>a</sup> 47%	Lap/Shoulder <sup>a</sup> 58%
No Restraint 44%	No Restraint 54%	In Lap <sup>b</sup> 0%
⑦ N = 15**	⑧ N = 7**	No Restraint 43%
		⑨ N = 12**

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

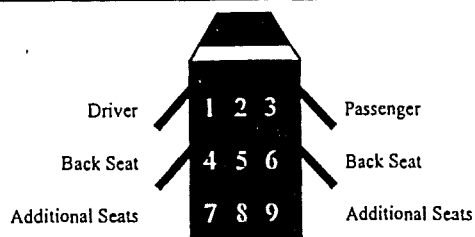


TABLE 8

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

**Maine, 1997**

***Infants Less Than 1 Year Old***

<b>NOT APPLICABLE</b>	Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%
	CRD-Correct 56%	CRD-Correct 63%
	CRD-Incorrect 31%	CRD-Incorrect 37%
	In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%
	No Restraint 13%	No Restraint 0%
<b>①</b> N = 0	<b>②</b> N = 7**	<b>③</b> N = 5**
Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%
CRD-Correct 86%	CRD-Correct 85%	CRD-Correct 77%
CRD-Incorrect 14%	CRD-Incorrect 10%	CRD-Incorrect 0%
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 6%	In Lap <sup>b</sup> 0%
No Restraint 0%	No Restraint 0%	No Restraint 23%
<b>④</b> N = 13**	<b>⑤</b> N = 34	<b>⑥</b> N = 12**
Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%
CRD-Correct 100%	CRD-Correct 0%	CRD-Correct 0%
CRD-Incorrect 0%	CRD-Incorrect 100%	CRD-Incorrect 0%
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%
No Restraint 0%	No Restraint 0%	No Restraint 0%
<b>⑦</b> N = 2**	<b>⑧</b> N = 1**	<b>⑨</b> N = 0

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

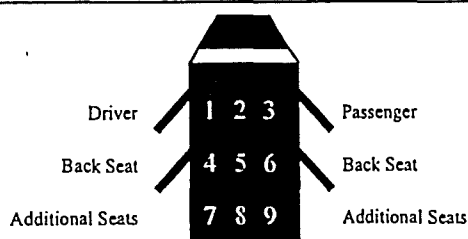


TABLE 9

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

**Maine, 1997**

*Children From Birth through 3 Years*

<b>NOT APPLICABLE</b>		Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%
		CRD-Correct 74%	CRD-Correct 74%
		CRD-Incorrect 21%	CRD-Incorrect 18%
		In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%
		No Restraint 6%	No Restraint 8%
<b>①</b> N = 0	<b>②</b> N = 31	<b>③</b> N = 47	
Lap/Shoulder <sup>a</sup> 1%	Lap/Shoulder <sup>a</sup> 1%	Lap/Shoulder <sup>a</sup> 2%	
CRD-Correct 90%	CRD-Correct 89%	CRD-Correct 89%	
CRD-Incorrect 7%	CRD-Incorrect 7%	CRD-Incorrect 3%	
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 2%	In Lap <sup>b</sup> 2%	
No Restraint 2%	No Restraint *	No Restraint 4%	
<b>④</b> N = 136	<b>⑤</b> N = 180	<b>⑥</b> N = 130	
Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%	
CRD-Correct 100%	CRD-Correct 70%	CRD-Correct 100%	
CRD-Incorrect 0%	CRD-Incorrect 15%	CRD-Incorrect 0%	
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 15%	In Lap <sup>b</sup> 0%	
No Restraint 0%	No Restraint 0%	No Restraint 0%	
<b>⑦</b> N = 6**	<b>⑧</b> N = 6**	<b>⑨</b> N = 6**	

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

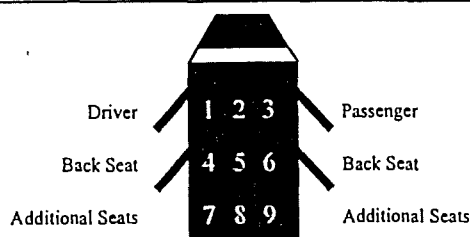


TABLE 10

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

**Maine, 1997**

*Toddlers Aged 1 through 3 Years*

<b>NOT APPLICABLE</b>		Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%
		CRD-Correct 79%	CRD-Correct 75%
		CRD-Incorrect 18%	CRD-Incorrect 16%
		In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%
		No Restraint 4%	No Restraint 9%
<b>①</b> N = 0	<b>②</b> N = 24	<b>③</b> N = 42	
Lap/Shoulder <sup>a</sup> 2%	Lap/Shoulder <sup>a</sup> 2%	Lap/Shoulder <sup>a</sup> 3%	
CRD-Correct 90%	CRD-Correct 90%	CRD-Correct 91%	
CRD-Incorrect 7%	CRD-Incorrect 7%	CRD-Incorrect 3%	
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> *	In Lap <sup>b</sup> 2%	
No Restraint 2%	No Restraint *	No Restraint 2%	
<b>④</b> N = 123	<b>⑤</b> N = 145	<b>⑥</b> N = 118	
Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 0%	
CRD-Correct 100%	CRD-Correct 83%	CRD-Correct 100%	
CRD-Incorrect 0%	CRD-Incorrect 0%	CRD-Incorrect 0%	
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 18%	In Lap <sup>b</sup> 0%	
No Restraint 0%	No Restraint 0%	No Restraint 0%	
<b>⑦</b> N = 4**	<b>⑧</b> N = 5**	<b>⑨</b> N = 6**	

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

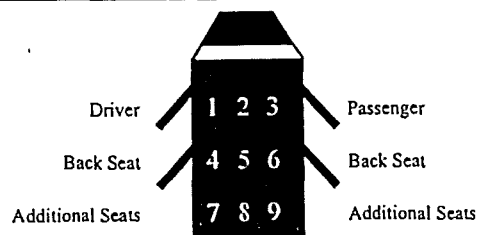


TABLE 11

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

**Maine, 1997**

*Children Aged 4 through 10*

<b>NOT APPLICABLE</b>		Lap/Shoulder <sup>a</sup> 48%	Lap/Shoulder <sup>a</sup> 76%
		CRD-Correct 6%	CRD-Correct 5%
		CRD-Incorrect 0%	CRD-Incorrect *
		In Lap <sup>b</sup> 2%	In Lap <sup>b</sup> 0%
		No Restraint 45%	No Restraint 19%
<b>①</b> N = 0	<b>②</b> N = 57	<b>③</b> N = 359	
Lap/Shoulder <sup>a</sup> 74%	Lap/Shoulder <sup>a</sup> 57%	Lap/Shoulder <sup>a</sup> 76%	
CRD-Correct 6%	CRD-Correct 5%	CRD-Correct 6%	
CRD-Incorrect *	CRD-Incorrect 3%	CRD-Incorrect *	
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 2%	In Lap <sup>b</sup> 0%	
No Restraint 20%	No Restraint 34%	No Restraint 18%	
<b>④</b> N = 304	<b>⑤</b> N = 146	<b>⑥</b> N = 270	
Lap/Shoulder <sup>a</sup> 73%	Lap/Shoulder <sup>a</sup> 52%	Lap/Shoulder <sup>a</sup> 72%	
CRD-Correct 19%	CRD-Correct 8%	CRD-Correct 14%	
CRD-Incorrect 0%	CRD-Incorrect 0%	CRD-Incorrect 4%	
In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%	In Lap <sup>b</sup> 0%	
No Restraint 9%	No Restraint 41%	No Restraint 10%	
<b>⑦</b> N = 23**	<b>⑧</b> N = 14**	<b>⑨</b> N = 22**	

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

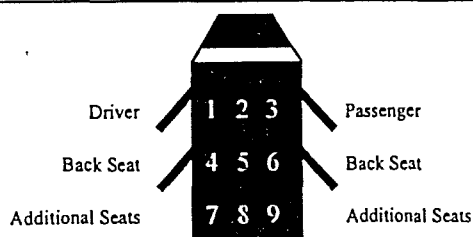


TABLE 12

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

**Maine, 1997**

*Children Aged 4 through 14*

Lap/Shoulder <sup>a</sup> 0% No Restraint        0%  <b>①</b> N = 0	Lap/Shoulder <sup>a</sup> 48% CRD-Correct        5% CRD-Incorrect      0% In Lap <sup>b</sup> 1% No Restraint        46%  <b>②</b> N = 66	Lap/Shoulder <sup>a</sup> 77% CRD-Correct        3% CRD-Incorrect      * In Lap <sup>b</sup> 0% No Restraint        20%  <b>③</b> N = 619
Lap/Shoulder <sup>a</sup> 72% CRD-Correct        4% CRD-Incorrect      * In Lap <sup>b</sup> 0% No Restraint        24%  <b>④</b> N = 440	Lap/Shoulder <sup>a</sup> 59% CRD-Correct        4% CRD-Incorrect      2% In Lap <sup>b</sup> 2% No Restraint        33%  <b>⑤</b> N = 193	Lap/Shoulder <sup>a</sup> 75% CRD-Correct        4% CRD-Incorrect      * In Lap <sup>b</sup> 0% No Restraint        20%  <b>⑥</b> N = 403
Lap/Shoulder <sup>a</sup> 67% CRD-Correct        12% CRD-Incorrect      0% In Lap <sup>b</sup> 0% No Restraint        21%  <b>⑦</b> N = 37	Lap/Shoulder <sup>a</sup> 56% CRD-Correct        6% CRD-Incorrect      0% In Lap <sup>b</sup> 0% No Restraint        38%  <b>⑧</b> N = 19**	Lap/Shoulder <sup>a</sup> 70% CRD-Correct        8% CRD-Incorrect      2% In Lap <sup>b</sup> 0% No Restraint        20%  <b>⑨</b> N = 38

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

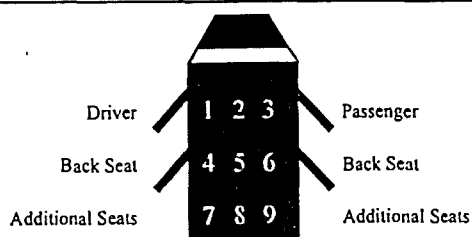




TABLE 13

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

**Maine, 1997**

***Children Aged 11 through 14***

Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 49%	Lap/Shoulder <sup>a</sup> 78%
No Restraint 0%	In Lap <sup>b</sup> 0%	No Restraint 22%
① N = 0	② N = 9**	③ N = 260
Lap/Shoulder <sup>a</sup> 68%	Lap/Shoulder <sup>a</sup> 67%	Lap/Shoulder <sup>a</sup> 74%
No Restraint 32%	In Lap 2%	No Restraint 26%
④ N = 136	⑤ N = 47	⑥ N = 132
Lap/Shoulder <sup>a</sup> 58%	Lap/Shoulder <sup>a</sup> 68%	Lap/Shoulder <sup>a</sup> 67%
No Restraint 42%	No Restraint 32%	No Restraint 33%
⑦ N = 14**	⑧ N = 6**	⑨ N = 15**

Cells in table reflect seating position in the vehicle shown below.

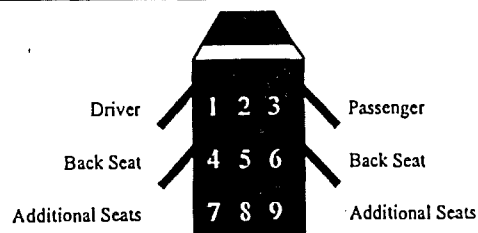
**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 14**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

**Maine, 1997**

*Persons Aged 15 through 18*

Lap/Shoulder <sup>a</sup> 54%	Lap/Shoulder <sup>a</sup> 28%	Lap/Shoulder <sup>a</sup> 57%
No Restraint 46%	No Restraint 72%	No Restraint 43%
① N = 368	② N = 14**	③ N = 480
Lap/Shoulder <sup>a</sup> 62%	Lap/Shoulder <sup>a</sup> 62%	Lap/Shoulder <sup>a</sup> 69%
No Restraint 38%	No Restraint 39%	No Restraint 31%
④ N = 130	⑤ N = 42	⑥ N = 142
Lap/Shoulder <sup>a</sup> 58%	Lap/Shoulder <sup>a</sup> 62%	Lap/Shoulder <sup>a</sup> 67%
No Restraint 42%	No Restraint 38%	No Restraint 33%
⑦ N = 9**	⑧ N = 5**	⑨ N = 9**

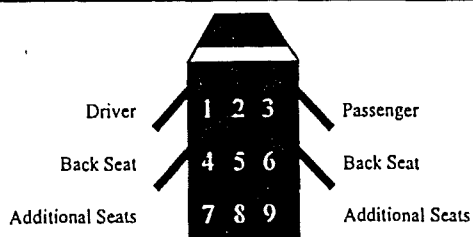
Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 15**  
**Restraint Use In Passenger Vehicles**  
**By Seating Position**  
**Statewide**

**Maine, 1997**

***Males Aged 15 through 18***

Lap/Shoulder <sup>a</sup> 47%	Lap/Shoulder <sup>a</sup> 16%	Lap/Shoulder <sup>a</sup> 49%
No Restraint 53%	No Restraint 85%	No Restraint 51%
① N = 210	② N = 6**	③ N = 210
Lap/Shoulder <sup>a</sup> 53%	Lap/Shoulder <sup>a</sup> 46%	Lap/Shoulder <sup>a</sup> 62%
No Restraint 48%	No Restraint 54%	No Restraint 38%
④ N = 66	⑤ N = 12**	⑥ N = 64
Lap/Shoulder <sup>a</sup> 0%	Lap/Shoulder <sup>a</sup> 100%	Lap/Shoulder <sup>a</sup> 100%
No Restraint 100%	No Restraint 0%	No Restraint 0%
⑦ N = 2**	⑧ N = 1**	⑨ N = 2**

Cells in table reflect seating position in the vehicle shown below.

**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages

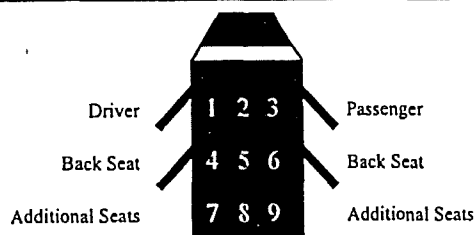


TABLE 16

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

**Maine, 1997**

***Females Aged 15 through 18***

Lap/Shoulder <sup>a</sup> 64%	Lap/Shoulder <sup>a</sup> 37%	Lap/Shoulder <sup>a</sup> 63%
No Restraint 36%	No Restraint 63%	No Restraint 37%
① N = 157	② N = 8**	③ N = 269
Lap/Shoulder <sup>a</sup> 71%	Lap/Shoulder <sup>a</sup> 73%	Lap/Shoulder <sup>a</sup> 74%
No Restraint 29%	No Restraint 27%	No Restraint 26%
④ N = 65	⑤ N = 27	⑥ N = 78
Lap/Shoulder <sup>a</sup> 75%	Lap/Shoulder <sup>a</sup> 53%	Lap/Shoulder <sup>a</sup> 57%
No Restraint 25%	No Restraint 47%	No Restraint 43%
⑦ N = 7**	⑧ N = 4**	⑨ N = 7**

Cells in table reflect seating position in the vehicle shown below.

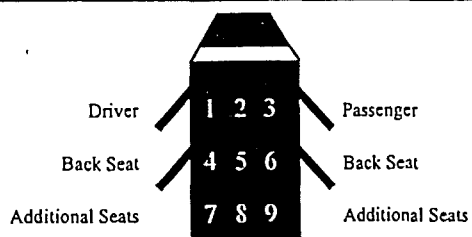
**Note:** Data are weighted, and the resulting non-integer frequencies are rounded for presentation in this table. Percentages are also rounded. The result of rounding may be percentages which sum to slightly more or less than exactly 100%.

**Key:** <sup>a</sup>Wearing lap and shoulder belt

<sup>b</sup>In the lap of another person

\*less than 1%, but not zero

\*\*Interpret with caution. Number of cases too small to permit calculation of meaningful percentages



**TABLE 17**

**Restraint Use In Passenger Vehicles  
By Age  
Statewide**

**Maine, 1997**

AGE	Lap or Lap/Shoulder Belt	CRD Correct	CRD Incorrect	In Lap	No Restraint	TOTAL	
						N	%
< 1 Year 1 thru 3	0%	79%	13%	3%	5%	75	100%
	2%	88%	7%	1%	2%	468	100%
< 1 thru 3	1%	87%	8%	1%	3%	543	100%
4 thru 10 11 thru 14	71%	6%	1%	*	22%	1,195	100%
	73%	0%	0%	*	27%	619	100%
4 thru 14	72%	4%	*	*	24%	1,814	100%
15 thru 18 19 +	58%	0%	0%	0%	42%	1,198	100%
	59%	0%	0%	0%	41%	16,619	
ALL AGES	59%	3%	*	*	39%	20,173	101%

Key: \*Less than 1%, but not zero

TABLE 18

Percent of Drivers Wearing Safety Belts  
Under Selected Conditions

MAINE, 1997

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STATE GROUP/CANADIAN VEHICLE LICENSE PLATE (travelling in Maine)		PERCENT OF DRIVERS WEARING SAFETY BELTS
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Canada	(N = 178)	82%
Maine	(N = 10,878)	57%
Other New England	(N = 576)	68%
NY, NJ, PA	(N = 266)	81%
Other U.S.	(N = 429)	71%

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DAY OF THE WEEK

Sunday	(N = 1,752)	59%
Monday	(N = 1,318)	52%
Tuesday	(N = 1,409)	59%
Wednesday	(N = 2,298)	61%
Thursday	(N = 2,110)	62%
Friday	(N = 1,232)	57%
Saturday	(N = 2,254)	57%

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ROAD CONDITIONS

Dry	(N = 10,852)	59%
Wet	(N = 1,196)*	53%

\*Number of observations under non-dry conditions may be too small to permit meaningful comparisons.

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WEATHER

Sunny	(N = 7,511)	58%
Rain	(N = 453)	51%
Fog	(N = 620)	56%
Cloudy	(N = 3,789)	60%

Table 18, continued

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TIME OF OBSERVATION		PERCENT OF DRIVERS WEARING SAFETY BELTS
7:00 - 8:30 A.M.	(N = 723)	51%
8:30 - 10:00	(N = 1,345)	58%
10:00 - 11:30	(N = 1,386)	60%
11:30 - 1:00 P.M.	(N = 1,044)	56%
1:00 - 2:30	(N = 1,454)	57%
2:30 - 4:00	(N = 1,822)	59%
4:00 - 5:30	(N = 2,110)	58%
5:30 - 7:00	(N = 2,490)	62%

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SIZE/TYPE OF VEHICLE

Economy Car	(N = 2,535)	67%
Intermediate	(N = 4,300)	62%
Sports, GT Car	(N = 508)	52%
Station Wagon	(N = 822)	68%
Van	(N = 1,042)	65%
Jeep-Type	(N = 1,037)	60%
Pick-Up Truck	(N = 2,131)	36%

**TABLE 19**  
**Motorcycles**  
**Presence/Absence of Helmet; by Age and Gender of Driver and Passenger**  
**Statewide, and Urban/Rural Counties**  
**Maine, 1997**

<b>DRIVER</b>	Male	96%
	Age 15-18	2%
	19 +	98%
	Wearing Helmet	48%
	<b>N = 159</b>	
<b>PASSENGER</b>	Male	10%
	Age 4-10	3%
	11-14	2%
	15-18	4%
	19 +	91%
	Wearing Helmet	39%
	<b>N = 43</b>	

**Urban Counties**  
**(N = 80 vehicles)**

<b>DRIVER</b>	Male	95%
	Age 19 +	98%
	Wearing Helmet	41%
<b>PASSENGER</b>	Male	19%
	Age 19 +	93%
	Wearing Helmet	28%

**Rural Counties**  
**(N = 79 vehicles)**

<b>DRIVER</b>	Male	96%
	Age 19 +	99%
	Wearing Helmet	56%
<b>PASSENGER</b>	Male	2%
	Age 19 +	89%
	Wearing Helmet	46%



**TABLE 20**

**Restraint Use, All Passengers  
All Passenger Vehicles  
All Ages  
All Seating Positions  
Urban And Rural Counties**

**Maine, 1997**

RESTRAINT TYPE	URBAN <sup>a</sup>		RURAL <sup>b</sup>		STATEWIDE <sup>c</sup>	
	N	%	N	%	N	%
LAP/Shoulder Belt	5,683	60%	6,059	57%	11,815	59%
CRD-Correct	288	3%	281	3%	541	3%
CRD-Incorrect	42	*	15	*	54	*
In Lap of Another	2	*	10	*	11	*
No Restraint	3,467	37%	4,244	40%	7,766	39%
TOTAL	9,724	100%	10,768	100%	20,608	101%

Key: <sup>a</sup>Observations in Cumberland, York, Kennebec, Androscoggin, and Penobscot counties, weighted to adjust for traffic volume within stratum.

<sup>b</sup>Observations in all other counties, weighted for traffic volume within stratum.

<sup>c</sup>Total weighted observations. Observations are weighted to adjust for oversampling rural counties relative to their traffic volume. Therefore, the statewide estimates do not reflect the simple arithmetic sum of the two strata.

\*less than 1%, but not zero

TABLE 21

**Driver Safety Belt Use/Nonuse  
And Use/Nonuse of Restraints<sup>1</sup> By Others in the Vehicle,  
By Seating Position**

Maine, 1997

When the driver IS wearing a belt...

Using Restraint 59% <b>①</b> N = 7,236	Restraint 82% <b>②</b> N = 50	Restraint 86% <b>③</b> N = 3,155
No restraint 16% <b>④</b> N = 636	No restraint 14% <b>⑤</b> N = 303	No restraint 14% <b>⑥</b> N = 648
Restraint 84% <b>④</b> N = 636	Restraint 86% <b>⑤</b> N = 303	Restraint 84% <b>⑥</b> N = 648
No restraint 16% <b>④</b> N = 636	No restraint 14% <b>⑤</b> N = 303	No restraint 16% <b>⑥</b> N = 648
Restraint 77% <b>⑦</b> N = 46	Restraint 73% <b>⑧</b> N = 23	Restraint 81% <b>⑨</b> N = 43
No restraint 23% <b>⑦</b> N = 46	No restraint 27% <b>⑧</b> N = 23	No restraint 19% <b>⑨</b> N = 43
Restraint 77% <b>⑦</b> N = 46	Restraint 73% <b>⑧</b> N = 23	Restraint 81% <b>⑨</b> N = 43
No restraint 23% <b>⑦</b> N = 46	No restraint 27% <b>⑧</b> N = 23	No restraint 19% <b>⑨</b> N = 43

When the driver is NOT wearing a belt...

No Restraint 41% <b>①</b> N = 5,138	Restraint 29% <b>②</b> N = 103	Restraint 28% <b>③</b> N = 2,029
No restraint 57% <b>④</b> N = 280	No restraint 56% <b>⑤</b> N = 146	No restraint 54% <b>⑥</b> N = 296
Restraint 43% <b>④</b> N = 280	Restraint 44% <b>⑤</b> N = 146	Restraint 46% <b>⑥</b> N = 296
No restraint 57% <b>④</b> N = 280	No restraint 56% <b>⑤</b> N = 146	No restraint 54% <b>⑥</b> N = 296
Restraint 59% <b>⑦</b> N = 17	Restraint 42% <b>⑧</b> N = 10	Restraint 55% <b>⑨</b> N = 21
No restraint 41% <b>⑦</b> N = 17	No restraint 58% <b>⑧</b> N = 10	No restraint 45% <b>⑨</b> N = 21
Restraint 59% <b>⑦</b> N = 17	Restraint 42% <b>⑧</b> N = 10	Restraint 55% <b>⑨</b> N = 21
No restraint 41% <b>⑦</b> N = 17	No restraint 58% <b>⑧</b> N = 10	No restraint 45% <b>⑨</b> N = 21

Note: Cell entries reflect seating position in vehicle.

Key: "Restraint" means persons are travelling with proper use of safety belt or CRD. "No restraint" means persons travelling without appropriate safety restraint, or with a restraint used improperly, or in the lap of another person.

TABLE 22

**Observed Safety Belt Use Rates  
Reported by States to NHTSA  
as of February 1998**

California	88%	Indiana	63%
New Mexico	87%	Nebraska	63%
Oregon	85%	Utah	63%
North Carolina	83%	Georgia	62%
Washington	82%	Missouri	62%
Hawaii	80%	New Jersey	62%
Iowa	75%	Ohio	62%
Texas	75%	Wisconsin	62%
Wyoming	75% *	<b>Maine</b>	<b>61%</b>
New York	74%	South Carolina	61%
Montana	73%	Tennessee	61%
Maryland	71%	Delaware	60%
Vermont	71%	Florida	60%
Michigan	70%	Oklahoma	60%
Nevada	70%	Colorado	59%
Alaska	69%	New Hampshire	58%
South Dakota	68%	Rhode Island	58%
Louisiana	67%	West Virginia	58%
Puerto Rico	67%	Kansas	56%
Virginia	67%	Idaho	54%
Dist of Columbia	66%	Kentucky	54%
Minnesota	65%	Massachusetts	53%
Pennsylvania	65%	Alabama	52%
Connecticut	64%	North Dakota	49%
Illinois	64%	Arkansas	48%
Arizona	63%	Mississippi	48%

Population-Weighted Average — 69%

\* Wyoming uses a survey that is N/A and is not factored into the national average.

*Source: National Highway Traffic Safety Administration World Wide Web site, February 17, 1998: From:  
<http://www.nhtsa.dot.gov/fedworld/nhtsa/tsp/oasp>*

**TABLE 23**

**Locations of Intersections  
at which  
Observations Were Conducted**

Observations at the selected intersections were conducted by each of two observers on opposite sides of the intersections, so that observations were recorded for two different streams of traffic.

**Locations (number of intersections)**

Auburn (2)	Lubec (1)
Augusta (1)	Millinocket (1)
Bangor (2)	Paris (1)
Belfast (1)	Plymouth (1)
Bridgton (1)	Portland (6)
Brownfield (1)	Presque Isle (1)
Brunswick (1)	Richmond (1)
Buxton (1)	Rockland (2)
Calais (1)	Rockport (1)
Caribou (2)	Saco (2)
Carthage (1)	Sanford (1)
Dover-Foxcroft (2)	Scarborough (1)
Dresden (1)	Sedgewick (1)
Eliot (1)	Sidney (1)
Ellsworth (3)	Skowhegan (2)
Fairfield (1)	South Portland (1)
Farmington (1)	St. George (1)
Fort Fairfield (1)	Swanville (1)
Fort Kent (1)	Topsham (2)
Gray (1)	Turner (1)
Greenville (1)	Waldoboro (1)
Jay (1)	Windsor (1)
Jonesport (1)	

## History of Occupant Protection Laws

### EFFECTIVE DATES

### LAWS

9-19-97	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.
9-19-97	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.
1-1-95	With the implementation of Tile 29A, the child safety seat law and seat belt law were combined into one law.
7-94	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>
9-29-87	Children aged 4 to 13 years must be secured in a child safety seat or safety belt.
9-30-89	Law expanded to include children 4 to 16 years.
10-9-91	Law expanded to include persons 4 to 19 years.
9-23-83	Children aged 0 to 4 years must be secured in a child safety seat.