

# MAINE STATE LEGISLATURE

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# *Safety Belt Use in*

*Maine*

*1997*



## *Executive Summary*



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

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

January 1998

## **EXECUTIVE SUMMARY**

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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%.

***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

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

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