

# Statewide Seat Belt Utilization in Indiana — An Overview of the Mandatory Seatbelt Law

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## INTRODUCTION

The 1985 Indiana General Assembly enacted legislation requiring front seat occupants in passenger motor vehicles travelling on Hoosier roadways to use safety belts. Governor Robert D. Orr signed that bill (Public Law 122-1985) into law in April 1985, with an effective date of July 1, 1987. The purpose of this presentation is to discuss this law and examine what we currently know about how frequently Indiana motorists are using their safety belts.

## THE LAW

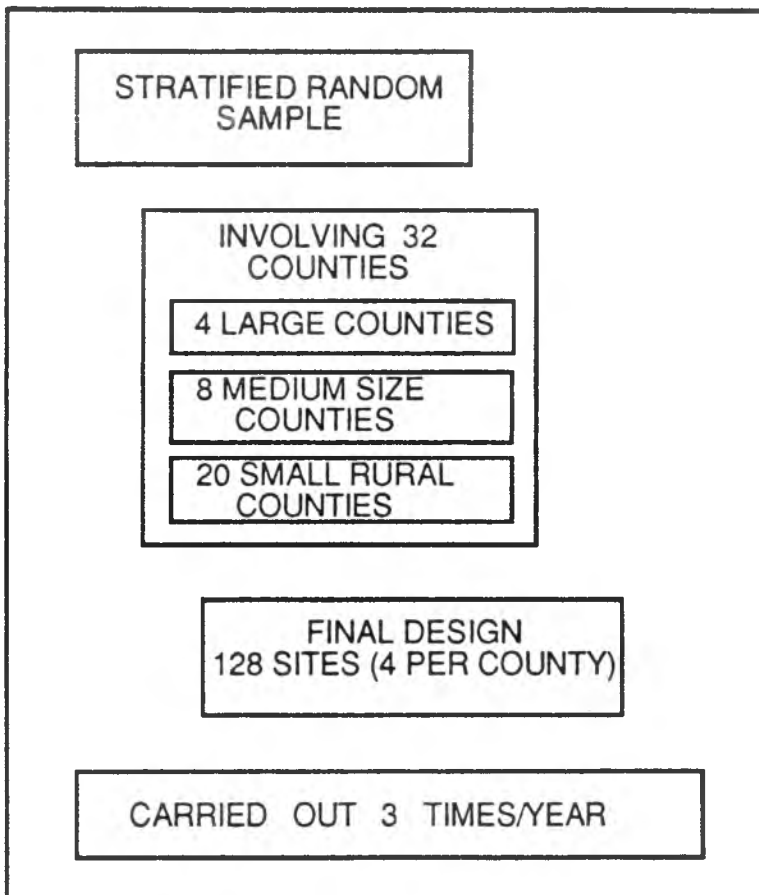
The actual specifications of the law are rather vague and may cause a bit of confusion as to exactly how its enforcement will proceed. As it is written all front seat occupants in passenger motor vehicles over the age of five years must use their safety belts or be subject to a citation which could result in a \$25.00 fine. However, the law does not specifically state who is responsible in the event that a minor is found to be in violation. It appears that the person found to be in violation receives the citation. In addition, the law does not specifically define a “passenger motor vehicle.” Using existing statutes, it appears that passenger motor vehicles include automobiles, buses (perhaps school buses), and some vans. The types of vehicles which are not covered by this definition include trucks, tractors, motorcycles, fire trucks, and other governmental and commercial vehicles. The law also specifically exempts certain individuals and vehicles such as postal vehicles and commercial vehicles subject to frequent stops, and persons who cannot wear a seatbelt for “medical reasons.” How a valid medical exemption is to be determined is not spelled out in the law. The other key factor of the law is the implication that motor vehicles may not be detained by enforcement officials “solely to determine compliance” to the law. Does this imply that this type of citation must accompany another type of violation? Some law enforcement agencies are implying that this will be their interpretation, however, other officials state that if an officer can determine non-compliance to

the law by passive observation, then the officer is justified in detaining that vehicle for the purpose of writing a citation. Obviously, there are many interpretations.

Only time and perhaps future court challenges will serve to clarify some of the vagueness of this particular law. However, it is anticipated that despite these potential problems in the wording of the law, Indiana will see a significant increase in safety belt utilization after July 1, 1987.

#### CURRENT SEAT BELT USE IN INDIANA

In 1986 Purdue and Indiana Universities undertook a joint program to determine safety belt usage on Indiana roads and highways. Three statewide survey waves were conducted in 1986 in order to establish reliable baseline values for safety belt use, and to develop a reliable and cost effective method for determining future safety belt usage. After com-



*Figure 1. 1986 Joint Study Between Purdue and Indiana Universities*

plete analysis of the 1986 surveys it was determined that a stratified sample of 128 sites in 32 counties was the most cost effective survey plan. The sample was stratified on the basis of county population into three strata: large, predominantly urban counties; medium sized counties with roughly 50 percent urban populations; and small, predominantly rural counties. The 128 sites were comprised of 50 percent state or US highways and 50 percent city streets. The sites were also divided by time period and day of the week so that no day or time period would dominate the sample. The final survey design is presented in Figure 1.

As a result of the efforts of the seatbelt usage surveys conducted jointly by Indiana and Purdue Universities in 1986, a late autumn usage rate of approximately 18 percent was determined on Indiana streets and highways. This was determined to be significantly lower than the summer usage rate of approximately 21 percent ( $\alpha = .05$ ). Thus, a shifting baseline of high summer use to lower autumn usage has been determined for the state as a whole. These results are based upon the three waves of surveys conducted in 1986, each consisting of 128 sites in the selected 32 counties, and 25,000 observations per wave. These survey results are presented in Tables 1 and 2.

**TABLE 1. Percentage of Seat Belt Use by County Site**

Strata	June	October	November
Large	25.9	20.3	21.1
Medium	20.1	19.5	18.8
Small	17.0	16.8	15.9
Overall	21.1	18.9	17.8

**TABLE 2. Percentage of Seat Belt Use by Road Type**

Road Type	June	October	November
US/State Rts.	23.4	19.9	20.5
City Streets	18.5	17.4	16.2
County	19.2*	—	—

\* Due to low vehicle volumes county road observations were dropped after June 1986.

Two significant trends seem to be consistent among all surveys. First, urban counties have displayed the highest usage rate of all three strata, and secondly, a higher usage rate was observed on US and state highways than for city streets (this was true for virtually all counties observed). This information is extremely important for determining the impact of

the mandatory seat belt law for Indiana which is scheduled to take effect July 1, 1987. There are currently three surveys planned for 1987—an April survey to determine pre-law usage, a June survey to determine immediate pre-law usage, and an August survey to determine post-law compliance.

#### POTENTIAL IMPACTS OF THE MANDATORY LAW

As observed in other states, usage rates dramatically increase immediately following the enactment of the law. In 1986, for example, the state of New York showed a usage rate of 70 percent. However, after the publicity surrounding the law subsides, these rates usually are seen to drop off to levels in the 50-60 percent range. It is for this reason that the Indiana post law survey will be conducted a full month after the enactment of the law in order to observe usage rates under more “normal” circumstances.

Mandatory seat belt laws are a relatively new effort in the U.S. to reduce fatalities and injuries associated with traffic accidents. Thus, there is no concrete past history on which to predict the impact of Indiana’s law. Generally speaking, effects of this law are expected to be:

1. *An increase in seat belt use among Indiana motorists.* Since the vast majority of the driving public attempt to comply with most traffic laws, it is felt that many motorists will wear their seat belts simply because it is the law.
2. *A potential decrease in highway fatalities in Indiana.* Because a fatal accident is a relatively rare event in light of the millions of miles travelled by all motorists, it is unclear that a significant decrease in fatalities will be demonstrated. This is particularly true if the post law usage rate is not significantly higher than 50 percent. It should be remembered that many fatal accidents are associated with collisions involving speeds that generate extreme forces. In such accidents survival may be slim no matter what precautions are taken. However, if many fatal accidents involve forces that “need not be fatal,” then a reduction could be possible. Only carefully collected data in the post law period will help determine an effect, if any.
3. *A reduction in serious personal injury.* Personal injury accidents occur at a much more frequent rate than fatal accidents. Therefore, the potential for seeing any impact from this law is much greater with respect to personal injury accidents. Also, many personal injury accidents occur at modest speeds where the forces at work are not so severe. In such accidents a person who is restrained is at a much lower risk of colliding with the interior of a vehicle than an unrestrained individual.
4. *An increase in the number of Seat belt “caused” injuries.* Safety belt testing clearly demonstrates that seat belts decrease the likelihood of injury

in the event of an accident, so the question here is not a debate over the effectiveness of safety belts. However, since the history of safety belt use among U.S. drivers and passengers has been sporadic at best, it is not clear whether there are certain conditions where seat belts actually cause injury. This is not to imply that a seat belt causes an injury where none would have occurred otherwise. It is simply an observation that if more motorists wear seat belts, then injuries associated with belt use could reasonably be expected to rise.