

**Statement before the Maryland House
Environmental Matters Committee**

Motorcycle Helmet Laws

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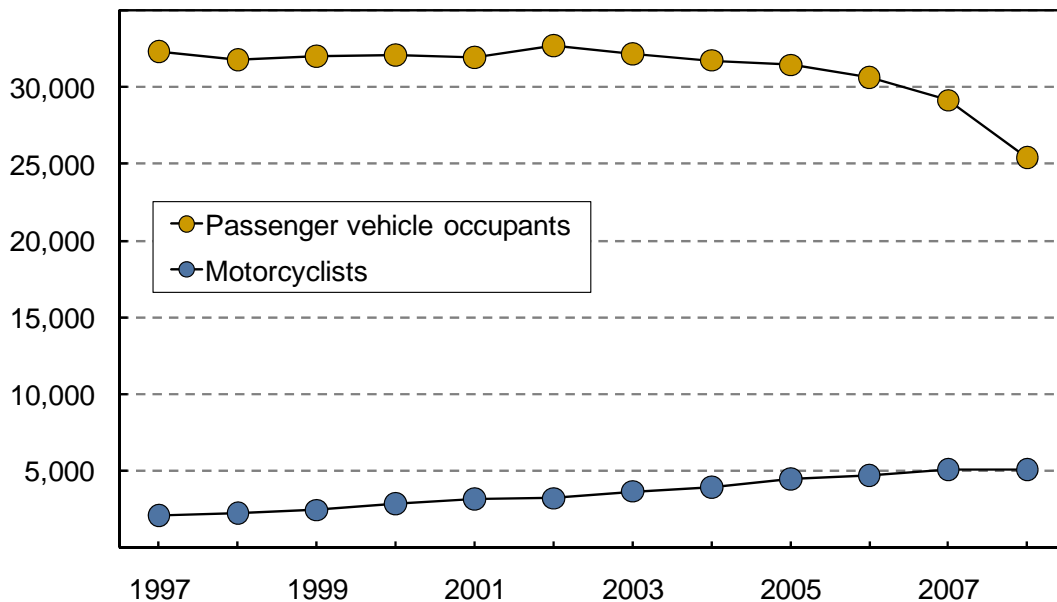
The Insurance Institute for Highway Safety is a nonprofit research and communications organization that identifies ways to reduce the deaths, injuries, and property damage on our nation's highways. We are supported by the nation's automobile insurers. The Institute is submitting research results on trends in motorcyclist deaths and on the benefits of motorcycle helmet laws in reducing deaths and injuries.

Trends in Motorcyclist Deaths

Motorcycle riders are much more likely to be killed or seriously injured than occupants of passenger vehicles. Per mile traveled, the number of motorcyclist deaths is about 26 times the number of vehicle occupant deaths.^{1,2}

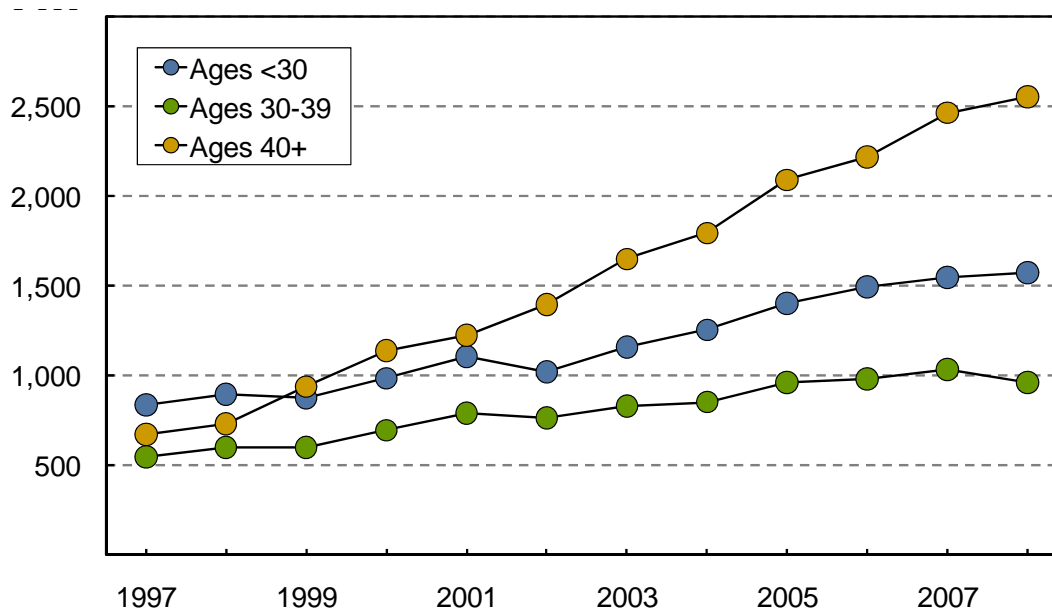
Motorcyclist deaths had been declining since the 1980s but began to increase in 1998 and have increased steadily since then. Between 1997 and 2008, motorcyclist deaths have more than doubled. This took place during a time when passenger vehicle occupant deaths decreased.

Annual Motorcyclist and Passenger Vehicle Occupant Fatalities, 1997-2008



There is more than a reversal of the fatality trend going on. There also is a demographic shift — deaths are rising among cyclists 40 and older, and this increase is pushing up the average age of cyclists killed (see figure on page 2).

Annual Motorcyclist Deaths by Age of Motorcyclist, 1997-2008



This shift does not reflect the aging of the population. It reflects the changing demographics of motorcycle buyers and riders. According to a 2003 survey by the Motorcycle Industry Council, the typical US bike owner is about 40 years old, earns \$55,900, and has a professional, managerial, or technical job.³ This compares with the typical owner in 1980, who was 24 years old and earned \$17,500. People often assume that older motorcyclists are safer than younger riders, but the growing number of cyclists 40 and older who are killed in crashes shows that mature riders are not immune from the obvious hazards of motorcycling.⁴

Mandatory Helmet Laws for All Riders Reduce Deaths

Helmets decrease the severity of injury, the likelihood of death, and the overall cost of medical care. They are designed to cushion and protect riders' heads from the impact of a crash. Just like safety belts in cars, helmets cannot provide total protection against head injury or death, but they do reduce the incidence of both. In a 1996 report to Congress, the National Highway Traffic Safety Administration (NHTSA) estimated that helmets reduce the risk of death in a motorcycle crash by 35 percent. Helmets are even more effective in preventing brain injuries, which often require extensive treatment and may result in lifelong disability. NHTSA estimated that helmets reduce the risk of brain injury by 67 percent.⁵

Deaths Go Up When States Abandon or Roll Back Mandatory Helmet Laws

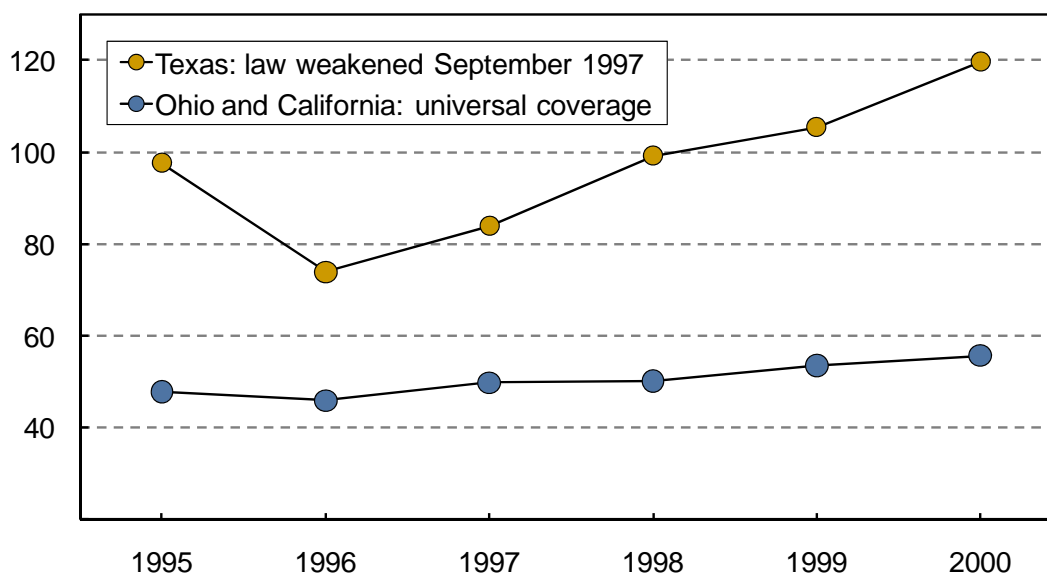
To some, it sounds reasonable to let those who ride decide. After all, many bikers say they would wear helmets even if there were no laws on the books. They just do not like Big Brother telling them what they have to do. Observations of helmet use tell a different story. Without a law or with one that applies only to some riders, only about 50 percent of motorcyclists wear helmets. With a law covering all riders, use approaches 100 percent.⁶ Helmet use directly affects the number of motorcyclist deaths and injuries as well as the public health care costs associated with injured riders.

States that have repealed or weakened their helmet laws have watched use rates go down and motorcyclist deaths go up. For example, in 1997 Arkansas dropped the helmet requirement for riders 21 and older. In the same year, Texas dropped the requirement for people 21 and older who have medical insurance or have taken a motorcycle training course. A NHTSA study looked at what happened, finding 97 percent helmet use before the laws were changed in both states. In the year after the law changed, the helmet use rate in Arkansas fell to 52 percent and motorcyclist deaths rose 21 percent. Helmet wearing in Texas went down to 66 percent in the year after the law was weakened, and deaths went up by about one-third. Head injuries increased in both states, and in Texas the cost of treating head injuries increased significantly.⁷

Institute research found that the rate of fatalities went up in Texas by 62 percent between 1996 and 2000 (see figure on page 4). In 1996, before the helmet law was changed to exempt some adult riders, the death rate per 100,000 motorcycle registrations was 74. Then this rate increased steadily, rising 62 percent to 120 in 2000. In comparison, the rate increased 22 percent (from 46 to 56 per 100,000) in California and Ohio, where helmet laws covering all motorcyclists were retained.

In a national study, researchers modeled motorcyclist fatality rates by helmet law after controlling for various factors such as per capita income, population density, and annual precipitation. Death rates (per 10,000 registered motorcycles, per 100,000 population, and per 10 billion vehicle miles traveled) were lowest in states with universal helmet laws.⁸

Motorcyclist Death Rates per 100,000 Registered Cycles: Texas, Ohio, and California



Effects of Unhelmeted Motorcyclists on Health Care Costs

Unhelmeted riders have higher health care costs as a result of their crash injuries, and many lack health insurance. In November 2002, NHTSA released a report reviewing 25 studies on the costs of injuries resulting from motorcycle crashes. Reviewers reported that the studies “consistently found that helmet use reduced the fatality rate, probability and severity of head injuries, cost of medical treatment, length of hospital stay, necessity for special medical treatments, and probability of long-term disability. A number of studies examined the question of who pays for medical costs. Only slightly more than half of motorcycle crash victims have private health insurance coverage. For patients without private insurance, a majority of medical costs are paid by the government.”⁹

Among the specific findings of several studies NHTSA reviewed:

- Results of NHTSA’s Crash Outcome Data Evaluation System study released in February 1996 show average inpatient hospital charges were 8 percent higher for unhelmeted motorcyclists in crashes than for helmeted riders — \$15,578 versus \$14,377.⁵
- After California introduced a helmet use law in 1992, studies show health care costs associated with head-injured motorcyclists declined. The rate of motorcyclists hospitalized for head injuries decreased 48 percent in 1993 compared with 1991, and total costs for patients with head injuries decreased \$20.5 million during this period.¹⁰

- A study of the effects of Nebraska's reinstated helmet use law on hospital costs found the total acute medical charges for injured motorcyclists declined 38 percent after the law was implemented.¹¹

Studies conducted in Nebraska, Washington, California, and Massachusetts indicate how injured motorcyclists burden taxpayers. Forty-one percent of motorcyclists injured in Nebraska from January 1988 to January 1990 lacked health insurance or received Medicaid or Medicare.¹¹ In Seattle, 63 percent of trauma care for injured motorcyclists in 1985 was paid by public funds.¹² In Sacramento, public funds paid 82 percent of the costs to treat orthopedic injuries sustained by motorcyclists in 1980-83.¹³ Forty-six percent of motorcyclists treated at Massachusetts General Hospital in 1982-83 were uninsured.¹⁴

Conclusion

Research consistently has shown that mandatory helmet laws that apply to all riders increase helmet use and decrease fatalities and injuries among motorcyclists. States that have repealed their laws or limited their laws to only some riders have seen helmet use decrease and deaths and injuries among motorcyclist increase. Retaining the existing universal helmet law in Maryland is in the best interests of the state's motorcyclists and the state's finances.

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