

REPORT TO THE BOARDS OF HEALTH
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Evolving Impact of the Repeal of the Michigan Helmet Law

On April 13, 2012, the State of Michigan repealed a 35-year mandatory motorcycle helmet law, after being vetoed twice under prior legislation. There were multiple arguments made for this legislation, primarily by the group American Bikers Aiming Toward Education (ABATE). These arguments included: personal freedoms; helmets won't stop accidents; riders are safer without helmets; and increase in tourism¹. They supported their argument regarding the increase in tourism with a study they commissioned that concluded Michigan would see \$54 million in new tourist spending and \$40 million in additional sales-tax revenue, among other economic benefits². To this date, there is no data to support any increase in tourism or revenue since 2012 due to the repeal of the helmet law that I was able to locate.

CDC analyzed 2008–2010 National Highway Traffic Safety Administration (NHTSA) data to determine the money saved by helmet use. Costs saved were estimated to be \$1,212,800 per fatality, \$171,753 per serious injury, and \$7,523 per minor injury (in year 2010 dollars.) Costs saved included injury-related costs (e.g., medical and emergency, services costs, and household and work productivity losses) and excluded costs (e.g., property damage and travel delay.) In 2010, approximately \$3 billion in costs were saved as a result of helmet use in the United States; however, another \$1.4 billion could have been saved if all motorcyclists had worn helmets³. Research has shown that when a state repeals helmet laws or opts for less restrictive requirements, helmet use decreases and motorcycle-related deaths, injuries, and costs increase. In 2000, for example, Florida changed its universal helmet law to a partial helmet law similar to law Michigan now has. It covered only riders aged over 21 years in age and with more than \$10,000 in medical insurance coverage. During the first two years after the law was changed, the motorcyclist death rate per 10,000 registered motorcycles in Florida increased by 21% and hospital admissions of motorcyclists with injuries to the head, brain, and skull increased by 82%⁴.

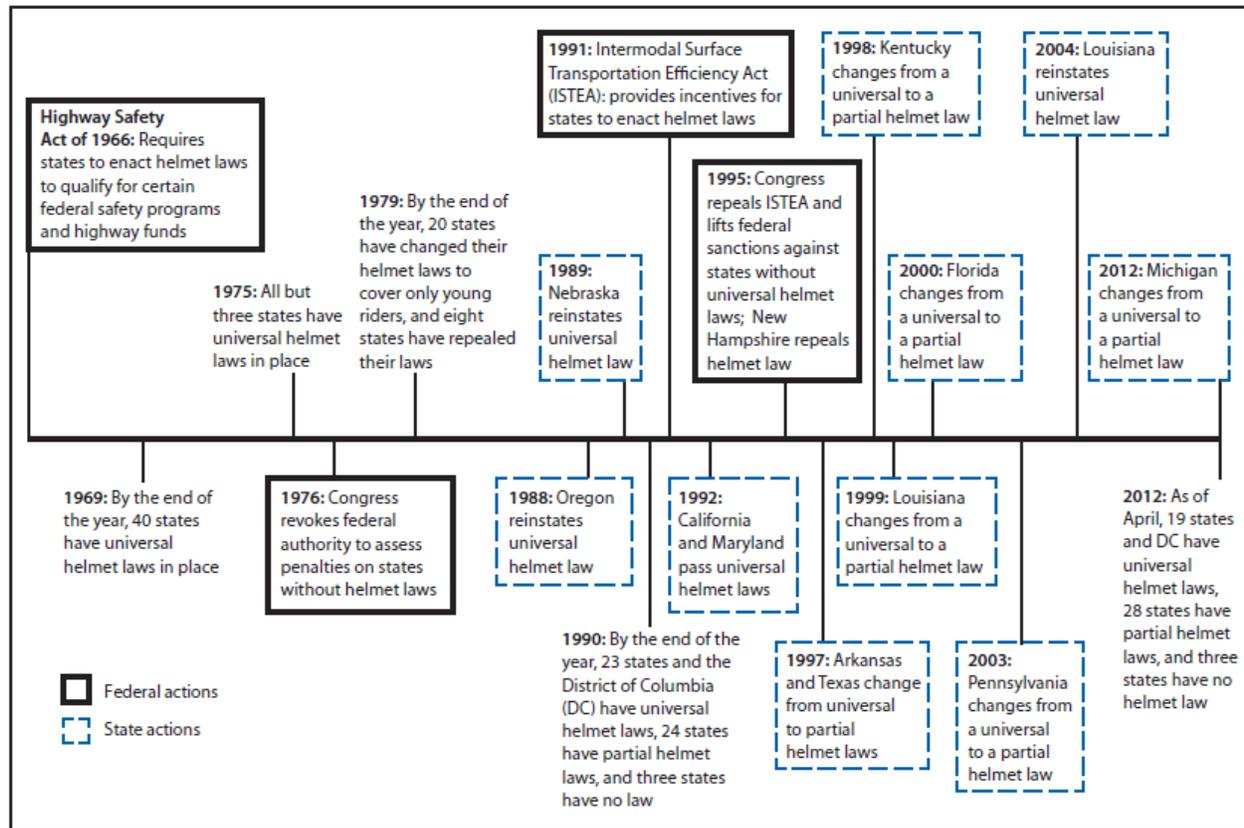
In July 2015, a group of surgeons from Grand Rapids presented data at the Midwest Surgical Association Annual Meeting regarding the change in traumas they have seen at Spectrum Health Butterworth Hospital since Michigan's helmet law change⁵. Their hospital is the only Level 1 trauma center serving three regions of Michigan. They compared patients admitted from motorcycle accidents from 2011 (prior to the helmet law repeal) and patients admitted from 2012 through 2014. There was no difference in gender and age of these groups of patients. In 2011, there were 79 patients admitted: 8% of accident victims were non-helmeted; those individuals had a 14% crash scene fatality rate, and there was an overall hospital death rate of 3%. Between 2012 and 2014, 266 presented after motorcycle accidents. Of these riders, 29% were not helmeted, 63% of the non-helmeted that died did so at the scene, and 6% overall died in the hospital. Non-helmeted riders were more likely to be intoxicated; however, this was not a significant predictor for any of the other variables.

Between 2012 and 2014, 10% of the non-helmeted riders died in the hospital while only 3% of those that wore helmets did not make it to discharge. Those that did not wear a helmet were admitted with a worse neurologic status, worse injury severity scores, were in the hospital 0.7 days longer on average, were twice as likely to be on the ventilator, and were on the ventilator a day longer than riders that wore a helmet. The hospital costs for non-helmeted patients were, on average, \$7,000 more, which was a 26% higher cost. Since their brain injuries and other injuries were more severe, it is likely their outpatient rehabilitation costs, disability and other costs to the state and society were also higher than those wearing helmets, however, that data was not evaluated in this study. The state of origin of the injured non-helmeted patient was not evaluated. If they were from out of state, this may have given some insight into any effect on tourism; it would also be interesting to see how their out of state insurance covered their expenses.

Unfortunately, since the helmet law repeal in Michigan three years ago, there have been reports of increased mortality rates in motorcyclists involved in accidents due to the increase in non-helmeted cyclists. Though disappointing, other states have been able to reverse these mortality trends. California experienced a 38% reduction in mortality in the first year after initiating a universal helmet law. In Nebraska, there was a decline from 13 to 8 per 10,000 motorcycle registrations one year after the reenactment of a helmet law⁶. It is suggested that the

Michigan legislature seriously consider reenacting a mandatory helmet law, as the clinical and financial impact of their decision to repeal the law has become very clear.

FIGURE 3. Motorcycle helmet legislation timeline — United States, 1966–2012



Suggested Recommendations of the Boards of Health

1. According to the National Highway Traffic Safety Administration (NHTSA), “the helmet is the most important piece of equipment. Safety helmets save lives by reducing the extent of head injuries in the event of a crash. Many good helmets are available. Make sure it fits comfortably and snugly, and it is fastened for the ride. In choosing a helmet, look for the DOT label on the helmet. The DOT label on helmets constitutes the manufacturer’s certification that the helmet conforms to the federal standard. Passengers should also wear a helmet.”
2. Consider communications with the Michigan legislature to ask that the helmet law be reenacted or, at a minimum, they examine if any increase in tourism revenue has occurred and if it is such that it compensates for the increased costs that the state and society has incurred.

References

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