

# The Safety and Economic Costs of Repealing Michigan's Helmet Law

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## Impact Statement

Based on analyses conducted by the University of Michigan Transportation Research Institute (UMTRI) using actual 2009 motorcycle crash and cost data for the state (the most recent year for which both crash and cost data were available), this is what we would have expected if the helmet law had been repealed in 2009:

- A decrease in helmet use from about 98% to about 50%
- An increase in the number of fatally and seriously injured motorcyclists from 842 to 1,221 (45%)
- An increase in the average cost per crash-involved motorcyclist (both monetary and non-monetary quality of life) from \$213,770 to \$317,031 (48%)
- An increase in total monetary costs from \$351 million to \$497.1 million (42%)
- An increase in total non-monetary quality of life costs from \$425.8 million to \$655 million (54%)

## Background

Motorcycle helmets are highly effective in increasing helmet use, and reducing the severity of head injuries, the likelihood of death, and the overall costs of medical and health care. Repealing Michigan's helmet law will lead to decreased helmet use, thereby increasing injury severity levels among crash-involved motorcyclists and resulting in significant increases in both monetary and non-monetary costs for the state.

### *Effectiveness of helmets and helmet laws*

- Helmet laws have been shown to result in helmet use approaching 100% compared to about 50% or lower in the absence of such laws.<sup>1,2,3</sup>
- Motorcyclists not using helmets are three times more likely to suffer traumatic brain injury in a crash than helmeted motorcyclists.<sup>4</sup>
- While helmet use cannot prevent all deaths, studies show that helmets reduce the risk of death in crashes by 37% to 42%.<sup>4,5,6</sup>
- Studies in other states that have repealed their helmet laws have shown an increase in fatalities among motorcyclists ranging from 35% to 100%.<sup>7,8</sup>
- Helmet laws that are restricted to motorcyclists age 21 and younger are difficult to enforce and result in reduced helmet use and increased death rates among these younger motorcyclists.<sup>9,10</sup>
- There is no credible evidence that helmets increase the risk of neck injury or reduce peripheral vision or hearing.<sup>11,12</sup>
- Helmet use, per se, does not affect the likelihood of crash involvement.

### ***Injury severity among crash-involved motorcyclists in Michigan***

- Because of the increased vulnerability of motorcyclists to injury, severity of injury is greater for motorcyclists than other motorists in general, and particularly for motorcyclists without helmets.
- Based on multiple years of Michigan data, about 23% of helmeted crash-involved motorcyclists each year sustain fatal or serious injuries compared to 47% of un-helmeted crash-involved motorcyclists.

### ***Costs associated with motorcycle crashes in Michigan***

- Costs include both monetary costs (i.e., medical care, future earnings, public services, and property damage and loss) and non-monetary quality of life costs (i.e., those associated with pain, suffering, and other intangible costs resulting from injury).
- In 2009 in Michigan, the average costs for each crash-involved motorcyclist were estimated to be \$96,600 in monetary costs and \$117,170 in non-monetary quality of life costs, resulting in \$213,770 in comprehensive costs.<sup>13</sup>
- These average costs greatly exceed the minimum insurance coverage requirement of \$20,000 included in HB 4008.
- Taking into account all motorcycle crashes in Michigan in 2009, societal costs totaled \$351 million in monetary costs, \$425.8 million in non-monetary quality of life costs, and \$776.8 million in total comprehensive costs.<sup>13</sup>
- Studies conducted in Michigan and nationally have shown that motorcyclists without helmets are far less likely to have medical insurance coverage.<sup>14,15,16,17</sup>

### ***Estimated impact of repeal of Michigan's helmet law***

These estimates are based on the following assumptions: 50% helmet use (as would be expected from other states' experiences); injury severity distribution by helmet use from 2009 Michigan data, and the same number of crash-involved motorcyclists from 2009.

- In the absence of a universal helmet law in Michigan, the average costs for each crash-involved motorcyclist would have been \$136,787 for monetary costs and \$180,244 for non-monetary quality of life costs, resulting in \$317,031 in total comprehensive costs.
- Under this scenario, the societal costs for Michigan in 2009 would have been \$497.1 million in monetary costs, \$655 million in non-monetary quality of life costs, and \$1.2 billion in total comprehensive costs.

### ***History of Michigan's helmet law***

In 1967, the US Department of Transportation required states to enact helmet use laws to qualify for certain federal programs and funds. After initially adopting a law, Michigan repealed its helmet requirement in 1968. The helmet law was quickly reinstated after significant increases in fatalities and serious injuries in first year. There is currently no federal funding associated with a helmet law. Since taking effect on June 1, 1970, Michigan's universal mandatory motorcycle helmet law has withstood 40 years of repeal attempts.

## References

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