

**Ten-year Post Motorcycle Helmet Repeal:
Michigan Motorcycle Traffic Crash Statistics 2012 – 2021
SMARTER (www.smarter-usa.org) August, 2022**

Introduction

The data summarized in this document covers the ten-year period following the repeal of Michigan's all-rider helmet requirement. The data demonstrate the deadly impact of this change.

The all-rider motorcycle helmet requirement in Michigan was repealed in April 2012. ABATE of Michigan lobbied for the change claiming the repeal would (1) have no negative impact on rider deaths (2) produce a dramatic increase in motorcycle ownership/registrations and (3) result in an influx in out-of-state riders visiting Michigan. The 10-year post repeal data show all of these claims to be false.

SMARTER has developed this document because ABATE of Michigan is spreading a technically false and highly misleading statistic regarding the impact of the repeal of the Michigan all-rider motorcycle helmet requirement.

A Note on Misleading Statistics

ABATE of Michigan representatives publicly presented the 10-yr post repeal data summary with the following statement: *In each year since the helmet law was repealed, more riders died wearing a helmet than riders not wearing a helmet.* While the statement is almost a true (2016 is an exception), either way the presentation of this single data point is highly misleading. The statement is designed to lead listeners or reader to believe that the helmet modification has not had a negative impact on fatalities. In fact, it is designed to make the audience believe wearing a helmet leads to an increase in the likelihood of being killed in the event of a crash.

The simple reason more fatalities are riders wearing helmets is because riders wearing helmets outnumber riders not wearing helmets by a significant amount. Most riders in Michigan have continued to wear a helmet even after the repeal.

For example, in 2014, 50 helmeted riders died and 49 non-helmeted riders died. There were nine fatalities where helmet use was unknown. In 2014 2,149 helmeted riders were involved in a crash and only 838 motorcyclists involved in a crash without a helmet. So, while the statement "in 2014 more riders died wearing a helmet than not wearing a helmet" is technically true, it is highly misleading.

Total Fatalities by Helmet Use years 2012 – 2021 – Michigan

Year	Helmet Worn	Helmet not Worn
2012	67	55
2013	63	59
2014	50	49
2015	75	56
2016	63	70
2017	72	59
2018	78	51
2019	56	54
2020	72	64
2021	77	70

All-rider Helmet Repeal Results in Significant Increase in Motorcyclist Fatalities

The statistics and conclusions summarized below accurately and correctly describe the impact of the helmet requirement repeal. The data is from *Michigan Motorcyclist Crash and Fatality Data and Charts: January, 2022* available here:

<https://smarter-usa.org/wp-content/uploads/2022/01/Charts-2021-Michigan-Motorcyclist-Crash-and-Fatality-Data-and-Charts-Jan.-2022-data-through-Jan.-2022.pdf>.

- **The average number of motorcyclist fatalities per year has increased 22.73 % in the ten years post helmet law change compared to the nine years prior (page 6).** The data show a yearly average of 110 fatalities for each year in the nine years prior to the law change compared to an average of 135 fatalities for each year in the 10 years post law change. In the ten years since the law change, 250 deaths could have been saved if all riders had been wearing a helmet.
- **There has been a 16.30 % increase in Michigan motorcyclist fatality rate per 100,000 registrations comparing years prior to and after the helmet law change (page 10).** Fatality rate per 100,000 registrations in years 2002 - 2011 was 47.18 compared to a rate of 54.81 for the years 2012-2021.

The sources for the data in the above referenced document are identified in the document. The main source is the annual Motorcycle Helmet Traffic Crash Statistics published by the Michigan Traffic Crash Reporting System.

The summary statements below are based on the statistics provided in the 2012 - 2021 reports. Contact SMARTER at smarterusa@gmail.com or the Michigan State Police, Traffic Crash Reporting System at 517-241-1699 for these reports.

- **Non-helmeted riders in crashes die at nearly twice the rate of helmeted riders (see chart below).** The average rate of helmeted deaths per 100 crashes for each of the ten years (2012-2021) is 3.194 compared to the average death rate per 100 crashes for non-helmeted riders of 6.119. Non-helmeted riders die at nearly 2x the rate of riders wearing a helmet.

- **Helmeted riders in crashes are under-represented in the fatality data compared to their numbers in the crash population (see chart below).** On average for each year 2012-2021 helmeted riders represent 62.79% of the crash population^{1,2} but only 49.68% of the killed riders.
- **Non-helmeted riders in crashes are over-represented in the fatality data compared to their numbers in the crash population (see chart below).** On average for each year 2012-2021 non-helmeted riders represent 28.39% of the crash population¹ but 43.40% of the riders killed.

Death Rate per Year by Helmet Use - Michigan

Year	Helmet Worn	Helmet not Worn
2012	2.43	6.37
2013	2.64	7.05
2014	2.33	5.85
2015	3.41	6.43
2016	2.75	6.52
2017	3.49	6.30
2018	4.08	5.92
2019	3.02	5.56
2020	3.83	5.53
2021	3.96	5.66

Over or Under Represented in Fatality Data by Year and Helmet Use – Michigan

Year	Helmet Worn		Helmet Not Worn	
	% of crash pop.	% of fatalities	% of crash pop.	% of fatalities
2012	69.94	51.94	21.85	42.64
2013	67.93	49.22	23.84	46.09
2014	65.72	46.30	25.63	45.37
2015	65.14	53.96	25.78	40.29
2016	61.40	44.68	28.74	49.65
2017	63.73	52.55	28.89	43.07
2018	63.46	58.21	28.58	38.06
2019	60.20	45.90	31.50	44.26
2020	55.73	47.68	34.31	42.38
2021	54.63	46.39	34.80	42.17

Out-of-State Ridership

One way of estimating whether the repeal of the all-rider helmet requirement resulted in an increase of out-of-state riders visiting Michigan is to analyze the percentage of out-of-state riders who are involved in crashes. The *Analysis of Motorcycle Crashes in Michigan 2009-2013* (https://smarter-usa.org/wp-content/uploads/2017/06/3_2014_Nov.-analysis-of-motorcycle-crashes-in-michigan-2009-2013.pdf) specifically investigated this question and found

“ Before and after the (law) modification, the percentage of out-of-state riders who were involved in Michigan crashes has remained stable at 5%.” This report indicates the helmet repeal did not increase the number of out-of-state riders visiting Michigan as ABATE claimed.

Motorcycle Ownership/Registrations

A reason advocates for weakening Michigan’s helmet law stated to support their cause was that providing riders with a choice regarding wearing or not of a helmet would result in increased motorcycle sales. In other words, more individuals would choose to ride as evidenced by an increase in motorcycle registrations.

Michigan Motorcyclist Crash and Fatality Data and Charts: January, 2022 (<https://smarter-usa.org/wp-content/uploads/2022/01/Charts-2021-Michigan-Motorcyclist-Crash-and-Fatality-Data-and-Charts-Jan.-2022-data-through-Jan.-2022.pdf>) page eight provides a review of Michigan motorcycle registrations for years 2007-2021. The chart shows the claim that changing the helmet law would result in increased motorcycle registrations is false. Weakening the helmet law has not resulted in an increase in registrations. The recent trend is, in fact, toward declining registrations as shown on the chart and as reported in *Motorcycles Registered in the United States, 2002 – 2021* (<https://smarter-usa.org/wp-content/uploads/2022/07/1-Motorcycles-Registered-in-the-US-2002-2021.pdf>).

Estimated Societal Costs of Helmet Repeal in Michigan 2012 - 2021

A March 2018 report titled “*Estimate of Reduction in Deaths, Injuries, and Societal Costs in 2015 Michigan Motorcycle Crashes with Helmet Use*” (<https://smarter-usa.org/wp-content/uploads/2018/03/1e.-Estimate-of-Reductions-in-Deaths-Injuriesd-and-Societal-Costs-Societal-Cost-in-2015-Michigan-Motorcycle-Crashes-with-Helmet-Use-2017-2015-Data.pdf>) completed by Lidia P. Kostyniuk, Ph.D, P.E., Research Scientist, Emerita with the University of Michigan Transportation Research Institute concluded that if helmets had been worn by all the crash-involved motorcyclists in 2015 total societal costs would have been reduced by \$185 to \$201 million. This report was based on 2015 data and the calculation was for 2015 only.

Using this 2015 data to provide a statistically imprecise estimate of total increased societal costs for the ten years (2012 – 2021) since the repeal of Michigan’s all-rider head protection law it can be estimated that the law change has cost between \$1,850,000,000.00 to \$2,001,000,000.00 in total societal costs.

Conclusion

The data presented in this report show the devastating consequences of the 2012 repeal of Michigan’s all-rider motorcycle helmet requirement. The three main claims made by advocates for repeal are demonstrably false.

1. *The Traffic Crash Reporting System data report “helmet use unknown’ and “other” in addition to “helmet worn” and helmet not worn” so the total percent for these two categories do not add up to 100.*
2. *Helmet use shows a declining trend. In 2012 69.94% of crash victims were wearing a helmet, in 2017 63.73% were wearing a helmet and in 2021 only 54.63% of the crash population were wearing a helmet.*