

Estimated Lives Lost by Unhelmeted Motorcycle Riders Michigan 2012-2023*

Introduction

Michigan's motorcycle helmet use requirement was modified in April of 2012 from an all-rider requirement to one that allows motorcyclist meeting certain requirements to choose to not wear a helmet.

According to *Analysis Report: Motorcycle-Involved Crashes in Michigan 2018-2022* (<https://smarter-usa.org/wp-content/uploads/2024/07/Motorcycle-Involved-Crashes-in-Michigan-2018-2022.pdf>)

Prior to the helmet law modification, in 2010 and 2011, the crash-involved helmet use percentage was 97.7%. Since 2011, the percentage has decreased steadily to a low of 61.0% in 2021 followed by a small increase to 61.5% in 2022.

Helmet use percentages as a function of seat position are significantly different between operator and passenger seat position after the helmet law modification. Both groups used helmets about equally before the helmet law modification, but afterwards, passengers' usage (64.8%) became significantly lower than that of operators (68.3%).

In the data below, the number of fatalities for unhelmeted motorcyclists if the unhelmeted riders died at the lower helmeted motorcyclist rate, is calculated. That number is calculated by multiplying the total motorcyclist involved in crashes without a helmet by the percent of helmeted rider crashes that result in a fatality. That result is then subtracted from the actual number of unhelmeted fatalities for that year providing an estimate of the lives lost due to the rider choice not to wear a helmet.

For example, in 2023 there were 1,089 unhelmeted motorcyclists in crashes. The percent of helmeted rider crashes that resulted in a fatality is 3.53. $1,089 \times .0353 = 38$. The actual unhelmeted number of fatalities in 2023 was 65. $65 \text{ minus } 37 = 27$ the estimated number of lives lost due to rider choice to not wear a helmet.

Fatality rates show normal variation over time however what is consistent for the years 2012 – 2023 is the fatality percent for motorcyclists not wearing helmets is almost always double that of motorcyclists wearing helmets.

2023

Total motorcyclists involved crashes wearing helmets = 1,992

Total fatalities helmet worn = 75

Percent of helmeted rider crashes that result in a fatality = 3.77

Total motorcyclists involved crashes without helmet = 1,090

Total fatalities helmet not worn = 72

Percent of unhelmeted rider crashes that result in a fatality = 6.61

Estimated number of fatalities if unhelmeted died at helmeted rate = 41

2023 Estimated number of lives lost due to rider choice to not wear a helmet = 31

2022

Total motorcyclists involved crashes wearing helmets = 1,941

Total fatalities helmet worn = 68

Percent of helmeted rider crashes that result in a fatality = 3.50

Total motorcyclists involved crashes without helmet = 1,213

Total fatalities helmet not worn = 91

Percent of unhelmeted rider crashes that result in a fatality = 7.50

Estimated number of fatalities if unhelmeted died at helmeted rate = 42

2022 Estimated number of lives lost due rider choice to not wear a helmet = 49

2021

Total motorcyclists involved crashes wearing helmets = 1,948

Total fatalities helmet worn = 75

Percent of helmeted rider crashes that result in a fatality = 3.85

Total motorcyclists involved crashes without helmet = 1,241

Total fatalities helmet not worn = 72

Percent of unhelmeted rider crashes that result in a fatality = 5.80

Estimated number of fatalities if unhelmeted died at helmeted rate = 48

2021 Estimated number of lives lost due rider choice to not wear a helmet = 24

2020

Total motorcyclists involved crashes wearing helmets = 1,881

Total fatalities helmet worn = 72

Percent of helmeted rider crashes that result in a fatality = 3.83

Total motorcyclists involved crashes without helmet = 1,158

Total fatalities helmet not worn = 64

Percent of unhelmeted rider crashes that result in a fatality = 5.53

Estimated number of fatalities if unhelmeted died at helmeted rate = 44

2020 Estimated number of lives lost due rider choice to not wear a helmet = 20

2019

Total motorcyclists involved crashes wearing helmets = 1,856

Total fatalities helmet worn = 56

Percent of helmeted rider crashes that result in a fatality = 3.02

Total motorcyclists involved crashes without helmet = 972

Total fatalities helmet not worn = 54

Percent of unhelmeted rider crashes that result in a fatality = 5.56

Estimated number of fatalities if unhelmeted died at helmeted rate = 29

2019 Estimated number of lives lost due rider choice to not wear a helmet = 25

2018

Total motorcyclists involved crashes wearing helmets = 1,914
Total fatalities helmet worn = 78
Percent of helmeted rider crashes that result in a fatality = 4.08

Total motorcyclists involved crashes without helmet = 863
Total fatalities helmet not worn = 52
Percent of unhelmeted rider crashes that result in a fatality = 6.03

Estimated number of fatalities if unhelmeted died at helmeted rate = 35

2018 Estimated number of lives lost due rider choice to not wear a helmet = 17

2017

Total motorcyclists involved crashes wearing helmets = 2,065
Total fatalities helmet worn = 72
Percent of helmeted rider crashes that result in a fatality = 3.49

Total motorcyclists involved crashes without helmet = 936
Total fatalities helmet not worn = 59
Percent of unhelmeted rider crashes that result in a fatality = 6.30

Estimated number of fatalities if unhelmeted died at helmeted rate = 33

2017 Estimated number of lives lost due rider choice to not wear a helmet = 26

2016

Total motorcyclists involved crashes wearing helmets = 2,292
Total fatalities helmet worn = 63
Percent of helmeted rider crashes that result in a fatality = 2.75

Total motorcyclists involved crashes without helmet = 1,073
Total fatalities helmet not worn = 70
Percent of unhelmeted rider crashes that result in a fatality = 6.52

Estimated number of fatalities if unhelmeted died at helmeted rate = 30

2016 Estimated number of lives lost due rider choice to not wear a helmet = 40

2015

Total motorcyclists involved crashes wearing helmets = 2,201
Total fatalities helmet worn = 75
Percent of helmeted rider crashes that result in a fatality = 3.41

Total motorcyclists involved crashes without helmet = 871
Total fatalities helmet not worn = 56
Percent of unhelmeted rider crashes that result in a fatality = 6.43

Estimated number of fatalities if unhelmeted died at helmeted rate = 30

2015 Estimated number of lives lost due rider choice to not wear a helmet = 26

2014

Total motorcyclists involved crashes wearing helmets = 2,149
Total fatalities helmet worn = 50
Percent of helmeted rider crashes that result in a fatality = 2.33

Total motorcyclists involved crashes without helmet = 838
Total fatalities helmet not worn = 49
Percent of unhelmeted rider crashes that result in a fatality = 5.85

Estimated number of fatalities if unhelmeted died at helmeted rate = 20

2014 Estimated number of lives lost due rider choice to not wear a helmet = 29

2013

Total motorcyclists involved crashes wearing helmets = 2,385
Total fatalities helmet worn = 63
Percent of helmeted rider crashes that result in a fatality = 2.64

Total motorcyclists involved crashes without helmet = 837
Total fatalities helmet not worn = 59
Percent of unhelmeted rider crashes that result in a fatality = 7.05

Estimated number of fatalities if unhelmeted died at helmeted rate = 22

2012 Estimated number of lives lost due rider choice to not wear a helmet = 37

2012

The 2012 data in this figure includes crashes both before and after the helmet law modification, but only a small proportion of motorcycle crashes occurred prior to April 13th in 2012.

Total motorcyclists involved crashes wearing helmets = 2,762
Total fatalities helmet worn = 67
Percent of helmeted rider crashes that result in a fatality = 2.43

Total motorcyclists involved crashes without helmet = 863
Total fatalities helmet not worn = 55
Percent of unhelmeted rider crashes that result in a fatality = 6.37

Estimated number of fatalities if unhelmeted died at helmeted rate = 21

2012 Estimated number of lives lost due rider choice to not wear a helmet = 34

Total estimated number of motorcyclists deaths due to riders choosing to not wear a helmet 2012-2023 = 358. That is an average of 30 deaths per year.

*Data source: Motorcycle Helmet Traffic Crash Statistics, Michigan State Police Traffic Crash Reporting System, Michigan State Police Traffic Crash Reporting Unit at 517-241-1699