BobSpanburgh_SB0397 Testimony_2025.pdf
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Position: FAV

Good afternoon Mr. Chairman, Vice-Chairman, and members of the committee. My name is Robert G. Spanburgh, Jr. I am the Legislative Representative and Chairman of the Board for ABATE of Maryland, our state's largest motorcycle rights organization.

I am respectfully requesting that the committee give a favorable vote to SB0397 (protective headgear requirement exception) named in remembrance of our former Director and Board Chairman, the late Gary "Pappy" Boward.

I have been a registered motorcyclist for over 40 years. When I obtained the class "M" endorsement on my Maryland driver's license, helmet usage was not mandated. I was able to exercise my freedom of choice as it pertains to helmet usage for 10 years, until helmet usage was mandated in 1992. In the over 30 years, since that time, fatality rates in motorcycle accidents in Maryland have not increased or decreased significantly.

Our organization continues to advocate for rider education to create and maintain a safer and more enjoyable riding experience for Maryland motorcyclists. We believe that accident avoidance is our most important asset in providing a safe motorcycling experience.

With this in mind, we ask for a favorable vote on SB0397.

Thank you.

Maryland SB 0397.pdf
Uploaded by: Jay Jackson
Position: FAV

Motorcycle Riders Foundation
PO Box 9090, Peoria, IL 61612
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"The only national motorcyclists' rights organization dedicated to on-street riders"

January 31, 2024

Bill: SB 0397 - Vehicle Laws- Protective Headgear Requirement for Motorcycle Riders- Exception

Position: SUPPORT

Committee: Senate Judicial Proceedings

Dear Chair, Vice-Chair, and Members of the Committee:

On behalf of the Motorcycle Riders Foundation (MRF), thank you for the opportunity to share our views on the proposed law regarding motorcycle headgear. We support SB 0397 and applaud the efforts of its cosponsors to address this issue.

The MRF is a national organization focused on providing leadership at a federal level for state motorcyclists' rights organizations, motorcycle clubs, and individual riders. The MRF is concerned with national and international issues that impact freedom and safety of American street motorcyclists, while also supporting the efforts of our state partners. We are committed to being national advocates for advancing motorcycling and its accompanying lifestyle and work in conjunction with a variety of partners to help educate elected officials and policymakers.

Motorcycling is something enjoyed by over 8.6 million Americans and over 118,000 Marylanders. With our network of over 250,000 motorcyclists nationally, and on behalf of our members in Maryland, we support SB 0397 because it recognizes that motorcyclists who have experience and appropriate training have a right to choose for themselves whether they want to wear a helmet.

SB 0397 would exempt, from the requirement to wear specified protective headgear while operating or riding on a motorcycle, an individual age 21 or older who (1) has been licensed to operate a motorcycle for at least two years; (2) has completed an approved motorcycle rider safety course; or (3) is a passenger on a motorcycle operated by a rider who meets either of these criteria. In placing limits on who can operate without a helmet, SB 0397 protects less-experienced motorcyclists while allowing personal choice.

SB 0397 should pass for the following reasons: (1) individual autonomy and right to choose, (2) national statistics do not support the continued mandate for wearing helmets, and (3) educating motorcyclists is more effective than requiring them to wear helmets.

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The Principles of Personal Autonomy Support the Passage of SB 0397

In our country, we tout our ability to choose. We can choose where we live, how to educate our children, what we can eat, drink, and even smoke. Wearing a helmet is a similar choice that ought to be made by the individual, not the state. In a NY Court of Appeals case in 1914, Judge Benjamin Cardozo wrote, "every human being of adult years and sound mind has a right to determine what shall be done with his own body." SB 0397 mirrors this idea - those that are 21 years or older, who have operated a motorcycle for two years, and taken a motorcycle rider safety course, can determine for themselves whether they want to wear a helmet.

Requiring helmets is a glaring example of paternalism. It's the state telling motorcyclists that it knows best and substituting its judgment for that of motorcyclists. Regardless of whether wearing a helmet is objectively 'good' or 'bad,' a motorcyclist should be allowed to decide for themselves whether or not they want to wear one. Safety is essential, but people can choose what safety precautions they wish to follow. SB 0397 recognizes that this choice belongs to the individual motorcyclist.

Using Statistics to Support Helmet Laws is Misleading

The data surrounding motorcycle deaths, accidents, and helmet usage is not clear on if requiring helmets actually reduces fatalities. There are no substantial differences in the fatality rate in states that require helmets and States that do not. When it comes to deaths, the National Highway Traffic Safety Administration (NHTSA) has found that since 2017 there has been a decrease in the number of motorcyclists killed in traffic accidents. Further, there is no evidence suggesting helmet laws impact the number of motorcycle fatalities.

Outside of fatalities, NHTSA reports that 70.1% of motorcyclists wear helmets, which is a 16% increase from 2017. At the time of this survey, 19 states required helmets, 28 states required only certain motorcyclists to wear helmets, and 3 had no requirements. The data presented does not distinguish between States that require helmets and States that do not. The data suggests that more motorcyclists are deciding to wear helmets for themselves, outside of a State or government telling them to wear the helmet. So, if more individuals are choosing to wear helmets in states that do not require them to, why continue to require them by law?

Maryland Should Focus on Education, Rather than on Legal Requirements

By focusing on education, rather than on a paternalistic legal requirement, SB 0397 focuses on learning about the various ways to operate a motorcycle, rather than focusing on punishing those who do not operate it in a way the state sees as satisfactory. In doing so, motorcyclists can learn about their motorcycle while also determining what safety precautions they want to take.

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While the fine of up to $500 associated with not wearing a helmet is a deterrent for some, it is not effective for others. Instead of placing an arbitrary fine that some can pay and then continue to not wear a helmet, Maryland should focus on education that complies with national standards and teaches people how to ride safely. In doing so, individuals will learn to evaluate whether they want to wear a helmet while also learning how to ride safely. These courses could also lead to a reduction in fatalities and accidents.

For these reasons, MRF respectfully requests a favorable vote on SB 0397.

Should you have any questions, please feel free to contact Jay Jackson at jay@mrf.org.

Sincerely,

Jay Jackson

Vice President

Motorcycle Riders Foundation

2024_PositionPaper-DeanHowes_CalvertChapter.pdf
Uploaded by: Ken Eaton
Position: FAV

ABATE of Maryland, Inc.

Calvert County Chapter

Position Paper in Favor of SB503 & HB 639

Prepared by Dean Howes with ABATE of Maryland

The information here serves only to cover the effectiveness of an all rider helmet law and not the effectiveness of a helmet itself. The actual effectiveness of helmets can only be determined by an accident to death ratio and there is insufficient "accurate" data available to arrive at such a figure.

1) Any data based on miles traveled/vehicle cannot be used for obvious reasons. (Some states reported 0 miles for motorcycles but still reported fatalities for motorcyclists. Over a 9-year period NHTSA reports that the # of registered motorcycles roughly doubled but the total miles traveled for motorcycles stayed nearly the same.)

2) The best way to measure the effectiveness of an all rider helmet law is to compare fatalities to motorcycle registrations ratios between states with all rider laws and "free states", preferably those with similar riding conditions, climate, and length of riding season. Example Montana, a free state is going to have a lower ratio than Georgia, an all rider state for obvious reasons.

3) Much of the opposition's testimony is based on seriously flawed, distorted, cherrypicked, and simply WRONG statistics. The first of these is that 37% of lives could have been saved if all states had an all rider helmet law. This a # they have adopted from NHTSA even though NHTSA's own statistics show this to be false! If the whole "37%" thing is true than why is there not a 37% less fatalities to registrations ratio in states, including Maryland that have all rider helmet laws. See attached ratios that are determined using statistics from NHTSA,FARS, and the Govenor's Highway Safety Council. There are now 33 free states and 17 mandatory states with the addition of Missouri and Nebraska as free states. Included here are ratios for all 50 states in 2013 and only states with similar riding seasons for subsequent years. (Note stats on following pages for Missouri are when they were a mandatory state.)

4) Also attached are numerous statistics from the opposition in previous years that are at the very least questionable and a few statistics to put thing in perspective.

5) There are also a number or probable benefits to the fiscal bottom-line by passing SB712. See cold hard realities page.

Some Cold Hard Realities

It is far cheaper to treat a dead patient.

An organ donor can donate organs that could save up to eight lives and tissue matter that could improve up to 50 lives.

Traffic accidents, especially motorcycle accidents, are a good source of organ donors. That's why many in the medical community sarcastically refer to motorcycles as "donorcycles".

A deceased person will no longer receive Social Security and Medicare even though they have paid in for years.

A deceased person will not require Medicare/Medicaid or long-term geriatric care into their 70s, 80s and 90s. A considerable savings to society.

Medical costs of treating traffic accidents is about 2% of total healthcare costs and motorcycle accidents about 2/10 of a percent.

Speeding fatalities are about 5 times (500%) that of unhelmeted riders. But this is not being addressed.

Pedestrian fatalities surpassed total motorcycle fatalities in 2014, 15, 16 by 1463 or 10% over three years and continue to do so.

Insurance rates are not higher in free states than all rider states. Surely the insurance industry has calculated and understands risk better than anyone.

There are 33 free states that have not gone bankrupt due to their reduced helmet laws.

History shows in states that have repealed their mandatory helmet laws there has been an increase in M/C registrations from 30 to almost 100%. (Which explains a lot of the increase in fatalities.) In Maryland in 2016 there were 123,936 motorcycles in Maryland, so an increased of 30% would result in 37,189 more motorcycles registered in Maryland. Let's say the average cost of a motorcycle is $14,000 so the tax on that is $840. Multiply that times 37, 189 and you get $31,231,200 tax revenue collected. This doesn't take into account titling fees and registrations every 2 years for 37,189 more motorcycles.

There would also be a positive impact on business as all must be insured and all require maintenance and repair. Most riders will spend considerable money on parts and accessories. Then there is the impact on tourism when we spend our money while recreational riding. All of this is taxed as well. Ask the mayor of Ocean City how motorcycles effect his budget in September.

Some interesting points and skewed #,s

In 2013 there were five free states with a combined # of M/C fatalities (55) which is less than the 59 M/C fatalities here in Maryland alone. This a true fact and perfect example of misrepresenting and "cherry picking" #'s and statistics. The five states were Alaska, Maine, N Dakota, Wyoming and Idaho. Obviously, these states have shorter riding seasons than Maryland.

For the "Doom and Gloom" effect, the opposition always uses 1997 stats for comparisons, a year which had the lowest fatality rate. They always point to the increased # not % of fatalities even though in 1997 there were 3.8 million M/C compared to 6.7 million in 2006 and 8.6 million in 2018.

The opposition always point to any increase in states that adopt freedom of choice but fail to mention the increase in M/C registrations when all rider laws are amended. These increases are between 30 & 100%.

Maryland Institute for EMS (Patricia Gainer) said 27.1% of M/C trauma patients were unhelmeted, Shock Trauma Center said 17% , Trauma Net said 8%. Since we know that helmets don't prevent accidents doesn't that mean that somewhere between 8 and 27 motorcyclists per 100 are not wearing a helmet when they ride? That's not what I see when I'm out on Maryland's roads. When was the last time you saw a rider without a helmet in Maryland? Come on guys, at least get together and pick a number.

Advocates for Highway Saftey (Jacquelin Gillan) said there were 11 times more unhelmeted fatalities in free states than there were in all rider states. NO KIDDING, there were probably hundreds of times more riders riding without a helmet in free states. You are probably 11 times more likely to drown swimming than standing on the dock. Advocates for Highway Safety said there was 56% decrease in M/C fatalities after the enactment of the all rider helmet law, Partnership for a Safer Maryland said 36%. Once again people pick a #. Advocates

for Highway Safety also said that $477 million were saved by the helmet law while Partnership for a Safer Maryland said $118 million? Once again people pick a #.

Partnership for a Safer Maryland (Jaqueline Milani) quotes the CDC "It's unclear what benefit motorcycle education has". I can't believe this was even said. Even NHTSA says that 25% of fatalities were unlicensed/untrained, even though they represent a much smaller % of total riders. I'm sure that Senators Miller and Stone, who helped enact the Maryland motorcycle program, would see this differently.

FATALITIES TO M/C REGISTRATIONS 2021

	# of Registered M/C	Fatalities	Fatalities per 10K reg M/C
		The Free States	
Pennsylvania	385,129*	230	5.97
Delaware	26,729	24	(A) 8.97
Ohio	389,657*	226	5.79
Indiana	234,393	137	(A) 5.84
Illinois	284,754*	176	(A) 6.18
Totals/Average	1,320,662	793	6.00
		The Mandatory States	
Maryland	104,783*	80	7.63
Virginia	188,042*	114	6.06
N, Carolina	250,075	233	9.32
W. Virginia	49,563*	29	5.85
Totals/Average	592,463	456	7.70

Even if you take out N. Carolina high rates stats the average for mandatory states would be 6.51 deaths per 10/K M/C registrations compared to 6.00 for free states.

*=Decease from previous year
A=Sharpe increase from past 10-year average

FATALITIES TO M/C REGISTRATIONS 2020

	# of Registered M/C	Fatalities	Fatalities per 10K reg M/C
		The Free States	
Pennsylvania	400,550	219	5.47
Delaware	26,594*	15	5.64
Ohio	392,928*	211	5.37
Indiana	230,658*	151	6.55
Illinois	303,917*	153	5.03
Totals/Average	1,354,647	749	5.53
		The Mandatory States	
Maryland	111,553*	8.5	7.62
Virginia	196,469	101	5.14
N, Carolina	243,437	192	7.89
W. Virginia	52.915	38	7.18
Totals/Average	604,374	416	6.88

Even if you take out N. Carolina high rates stats the average for mandatory states would be 6.21 deaths 10/K M/C registrations compared to 6.00 for free states.

*=Decease from previous year

FATALITIES TO M/C REGISTRATIONS 2019

	# of registered M/C	Fatalities	Fatalities/10K reg M/C
		The Free States	
Pennsylvania	366,641	176	4.80
Delaware	28,312	18	6.36
Ohio	406,543	162	3.98
Indiana	252,280	127	5.46
Illinois	314,802	138	4.38
Totals/Av	1,368,578	621	4.54 average
		The Mandatory States	
Maryland	113,195	75	6.26
Virginia	193,813	102	5.26
N. Carolina	187,849	208	11.07
W. Virginia	46,763	28	5.99
Totals/Av	541,620	413	7.63

Even if you take out North Carolina's reported statistics the average for the mandatory states would be 5.79 deaths per 10K registered M/C compared to the 4.54 for the free states.

FATALITIES TO M/C REGISTRATIONS 2018

	# of registered M/C	Fatalities	Fatalities/10K reg M/C
		The Free States	
Pennsylvania	393,509	165	4.19
Delaware	26,035	17	6.52
Ohio	388,108	145	3.74
Indiana	231,183	117	5.06
Illinois	300,247	119	3.96
Totals/Av	1,399,081	563	4.20 average
		The Mandatory States	
Maryland	114,460	62	5.42
Virginia	200,422	100	4.99
N. Carolina	236,636	191	8.07
W. Virginia	52,641	39	7.41
Totals/Av	604,159	392	6.49

Even if you take out North Carolina's reported statistics the average for the mandatory states would be 5.47 deaths per 10K registered M/C compared to the 4.20 for the free states.

FATALITIES TO M/C REGISTRATIONS 2017

	# of registered M/C	fatalities	fatalities/10K reg M/C
		The Free States	
Pennsylvania	377158	187	4.9
Delaware	27810	10	3.5
Ohio	410187	157	3.8
Indiana	250579	149	5.9
Illinois	333943	162	4.8
Totals/Av	1,399,677	665	4.8 average
		The Mandatory States	
Maryland	118277	86	7.3
Virginia	193951	117	6.0
N. Carolina	188843	176	9.3
W. Virginia	60582	26	4.3
Totals/Av	561653	405	7.2

Even if you take out North Carolina's reported statistics the average for the mandatory states would be 6.1 deaths per 10K registered M/C compared to the 4.8 for the free states. Where is evidence of 37% lives saved?

FATALITIES TO M/C REGISTRATIONS 2016

	#of registered M/C	fatalities	fatalities/10K reg. M/C
The Free States			
Pennsylvania	393037	191	4.9
Delaware	28158	14	4.9
Ohio	408114	199	5.0
Indiana	223603	101	4.5
Illinois	314807	155	4.9
Totals/Av	1,367,719	660	4.8
The Mandatory States			
Maryland	123936	75	6.1
Virginia	191820	79	4.1
N. Carolina	195618	185	9.5
W. Virginia	61090	29	4.7
Totals/Av	572,464	368	6.4

Fatalities to M/C registrations 2013 all 50 states

	#of registered M/C	Fatalities	fatalities/10K reg M/C
		The Free States	
*Illinois	352318	148	4.2
*Iowa	183294	41	2.2
Alaska	32207	2	0.6
Arizona	188360	146	7.8
Colorado	184549	83	4.5
Connecticut	91054	50	5.5
Hawaii	40564	17	4.2
Idaho	64944	24	3.7
Indiana	218630	90	4.1
Kansas	99169	35	3.5
Maine	63114	11	1.7
Minnesota	237259	59	2.5
Montana	171085	32	1.9
New Hampshire	73612	24	3.3
New Mexico	65321	40	6.1
N Dakota	35756	9	2.5
Ohio	402264	130	3.2
Oklahoma	126883	92	7.3
S Dakota	86710	22	2.5
Utah	64970	30	4.6
Wisconsin	323378	81	2.5
Wyoming	31397	9	2.9

Alaska through Wyoming under 18 must wear a helmet

*No law whatsoever pertaining to helmets in these states.

Fatalities to M/C registrations 2013 50 states cont'd

The Free States cont'd

	# of registered M/C	Fatalities	fatalities/10K reg M/C
*Delaware	30056	20	6.7
Arkansas	74196	56	7.5
Kentucky	109821	78	7.1
Pennsylvania	400908	178	4.4
Rhode Island	32252	11	3.4
S Carolina	113315	120	10.5
Texas	443856	487	11.0
Florida	545452	460	8.4
Michigan	267292	127	4.8
Totals/Av	5,153986	2712	5.26

*under 19 must wear a helmet

Arkansas through Michigan under 21 must wear a helmet.

Florida and Michigan require additional 10K of insurance.

Fatalities to M/C registrations 2013 All 50 states cont'd

The mandatory all rider states

	# of registered M/C	Fatalities	Fatalities/10K reg M/C
Alabama	118084	80	6.7
California	799900	447	5.6
Georgia	200133	100	5.0
Louisiana	113778	84	7.4
Maryland	99560	59	5.9
Massachusetts	125122	39	3.1
Mississippi	28433	38	13.4
Missouri	184723	71	3.8
Nebraska	56224	14	2.5
Nevada	70675	50	7.1
New Jersey	152111	55	3.6
New York	345118	168	4.9
N Carolina	195493	134	6.9
Oregon	89797	31	3.5
Tennessee	163820	131	8.0
Vermont	28777	5	1.7
Virginia	189689	63	3.3
W Virginia	58021	24	4.1
Washington	227073	73	3.2
D.C.	4170	3	7.2
Totals/Av	3,001,201	1669	5.56

Slightly higher than the average for the "Free" states?

SB397_Helmet_KEaton-Favorable_Feb2025.pdf
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Position: FAV

ABATE OF MARYLAND, INC.

Dedicated to Freedom of the Road & Responsible Motorcycle Legislation Since 1974

To: The Honorable William C. Smith, Jr., Chairman and Members of the Judicial Proceedings Committee

From: Ken Eaton, Director, Executive Director, ABATE of Maryland, Inc.

Date: February 4, 2025

Re: **SB397** - Vehicle Laws - Protective Headgear Requirement - Exception (In Remembrance of Gary "Pappy" Boward)

Position: **FAVORABLE**: **SUPPORT**

I am a BIKER from Queen Anne's County MD – District 36. I have ridden many, many miles of smiles across 30 different states in nearly 40 years on street bikes. I attend leadership and legislative seminars, I have been to several "Meeting of the Minds" events where bikers from all over the country, and a few from other countries, gather to discuss motorcycle related issues. I attend Transportation Safety Summits, meet with all types of motorcycle related groups, clubs, and independent riders alike. I am a part of a large group of **motorcycling experts**. We spend a large part of our lives around motorcycles and bikers.

ABATE of Maryland, Inc. represents over 100,000 on road motorcycles that are registered in Maryland. We are a state motorcycle rights organization that brings together the voices of independent riders, clubs, riding organizations, etc. We have chapters throughout the state and our members include a diverse cross-section of motorcycle riders in Maryland. We cover the mountains to the ocean and every place in-between. Our members and friends include people of every race. We have junior members that hope to ride the roads alongside us one day. All of our members and board members are VOLUNTEERS. No one gets paid to be a part of our organization. We all dedicate our personal time and money to fighting for motorcyclists' rights.

ABATE of Maryland, Inc. **SUPPORTS SB 397** - Vehicle Laws - Protective Headgear Requirement - Exception (In Remembrance of Gary "Pappy" Boward). A large portion of our membership feels very strongly that the **FREEDOM OF CHOICE** regarding the use of motorcycle helmets in Maryland should be restored to us as motorcyclists. Please note that the Fiscal Policy on this bill in 2024 was listed as minimal. It states that "any impact of Medicaid expenditures and federal fund revenues is assumed to be negligible." During times of budget woes like we have right now, "negligible" cost should be important.

ABATE is NOT a one trick pony. We have worked in the halls in Annapolis since 1974. We have fought for and against numerous pieces of legislation. If it affects motorcyclists, we are tracking it and working on it. We try to make sure that the state, counties, and municipalities are a part of May is Motorcycle Safety & Awareness Month. We work closely with MDOT-MVA to hold motorcycle safety events and make sure that some of the motorcycle registration funds go back towards motorcycle safety & awareness. We were instrumental in getting the Motorcycle Safety Program started in Maryland. We have worked on bills that include violation of right-of-way, profiling, toll increases, passenger footrests, handlebar heights, license plate size, night-time awareness auxiliary lighting, definition of a motorcycle, motorcycle parking, motorcycle check points, and helmet bills, just to name a few.

Right now, we would like to make Maryland the 34th state to provide **FREEDOM OF CHOICE** regarding helmets. Currently, there are 33 other states that do not have mandatory helmet laws for motorcyclists.

- 3 states are 100% Freedom of Choice
- 30 states are Freedom of Choice – Age Restricted

- 17 states & Washington DC have a helmet mandate for ALL riders

The 33 states that allow **FREEDOM OF CHOICE** are not on the brink of bankruptcy because motorcyclists are NOT wearing helmets. Actually, we have found that most of the **FREEDOM OF CHOICE** states have a lesser rate of fatal accidents per registered motorcycle than mandatory helmet states. As motorcyclists, we seem to get pigeon-holed as being a "social burden." Surely there are numerous other accidents such as falls at the house, car & truck accidents, sports injuries, etc., that significantly contribute to traumatic injury statistics. Cancer, heart disease & strokes are the top three killers in Maryland. Vehicle crashes are lumped into the number 4 slot with several other "Preventable Injuries".

We were successful in getting legislation passed in Maryland that prohibited profiling of motorcyclists. We should start thinking about why we are being profiled as being more of a "social burden" than any other injury classification. Why are pedestrians, bicycle riders, water/snow skiers, boaters, mountain bikers, automobile drivers, commercial truck drivers, etc., not mandated to wear helmets? As motorcyclists, we are MANDATED by law to make an additional purchase of a motorcycle helmet, that is allegedly a required safety device. No other vehicle classification on the roadway requires adults to make additional "safety device" purchases to enjoy driving or riding after the initial purchase.

The other side of this is a helmet only protects approximately 17% of the average body. There are numerous other vital organs and body parts that remain unprotected in the other 83%. Quite often, motorcycle riders receive major chest, spine, legs, arms, and other significant injuries. As motorcycle riders, we take inherent risks to enjoy our way of life. Gloves, boots, jackets, chaps, etc. are all other tools available to us to use as we feel necessary. Personally, I would never go on the road without boots and jeans. Others are perfectly comfortable wearing sneakers and shorts. It is a **FREEDOM OF CHOICE**.

Most of us have had friends that have experienced motorcycle accidents. Some have been minor; some have been major. However, there are over 4 million licensed drivers in the State of Maryland, with over 100,000 of them being licensed to ride motorcycles. We are talking about 2.5% of the licensed drivers, probably much less as many that are licensed just do not ride or own motorcycles any longer. I had friends that have worn helmets in accidents and died. I also have had friends that were not wearing helmets and made out fine. I also have had many, many, more friends that have died of other causes such as heart disease, cancer, traumatic brain injuries from falls at home, construction accidents, automobile accidents, COVID, the list goes on. At some point, if you believe in any higher power, you really just have to realize that NONE of us are going to make it out alive. We are ALL going to die someday. No helmet or any other device is going to stop our deaths if it is our time to go. I have an expiration date, I just do not know what date that is, and I prefer to live my life to the fullest.

Regarding medical costs, according to the National Highway Traffic Safety Division (NHTSA), DOT HS 810 581 – Rehabilitation Costs and Long Term Consequences of Motor Vehicle Injury publication, the following is the "Adjusted Federal Prospective Payment for Motorcyclists by Diagnosis Group (in 2002 dollars), specifically relating to Traumatic Brain Injury, which seems to be of great concern to some.

Diagnosis Group	Motorcycle Injury	Other Motor Vehicle	Attempted Suicide	Assault	Other Unintentional
Traumatic Brain Injury	$ 16,545	$ 16,441	$ 17,096	$ 15,369	$ 15,169

Even if you adjust these for 2025 dollars, the ratios stay the same. TBI's as a result of a motorcycle injury are less costly than "Attempted Suicide," and pretty close to the "Other Motor Vehicle" category. Even when you look at the Average cost per day (mean total cost / Average length of stay), the TBI costs are lower than the average of $796 when compared to the other Rehabilitation Impairment Categories (RIC).

Bottom line, accidents happen. The cost of caring for an un-helmeted rider vs a helmeted rider does not seem to make a significant difference, especially considering amputation, fractures, and other orthopedics.

Bikers as a group are blue collar, white collar, no collar, and everything in between. We belong to professional organizations, social organizations, and fraternal organizations. We are Elks, Masons, Shriners, Lions, the local PTO, and scout leaders, etc. Many are active or retired military. Many of us belong to other riding organizations. American Legion Riders, VFW Riders, ABATE of nearby states, Winged Riders, or any of the numerous clubs and groups. We are members of other motorcycle organizations such as the American Motorcyclist Association, The Motorcycle Riders Foundation, Bikers Without Borders, Bikers Against Child Abuse, etc. We plan, attend, donate and spend countless hours and dollars supporting events that benefit our communities.

There are many members here in the General Assembly that own and ride motorcycles. As many of you are aware, motorcycling is not an inexpensive lifestyle. Motorcycles range in cost from $5,000 to $50,000 or even higher. An exceptionally large percentage of us have medical insurance coverage. Actually, in Maryland, most people are required to have health insurance or pay a penalty in taxes. I think the poor dirty biker argument that is a "social burden" has gone away long ago. The Maryland Health Connection was started some time ago, to "protect your health and your wallet."

Also, Maryland is situated between two states that do not have mandatory helmet laws. Riders from **FREEDOM OF CHOICE** states will often bypass Maryland, as long as possible. They spend their money elsewhere buying gas, food, drink, hotel rooms, parts, services, accessories, and many other items. I live only about 17 miles from the Delaware line. Often, I choose to ride in Delaware and PA to do my riding where I can have the **FREEDOM TO CHOOSE**. My hard-earned dollars go to businesses in those states when I am riding there.

The Town of Ocean City Maryland is the host town to a large motorcycle rally every fall. Riders from all over the country converge upon Ocean City and the surrounding areas for the event. Many riders from Delaware, Pennsylvania, Ohio, Indiana, and Michigan, travel through Delaware as long as possible to enjoy the **FREEDOM OF CHOICE**. Yes, motorcyclists will go out of their way to avoid a particular state or roadway, just as easily as they will travel long distances to enjoy a rally, a scenic road, or a side trip to a fantastic destination. The reality is many are spending their tourism dollars in other states as long as possible before coming to Maryland. Many other riders refuse to come to Maryland because they are not allowed to have the Freedom to Choose. For example, one of the largest rallies in the country is located in South Dakota. Once a rider leaves Maryland, he can head up through Pennsylvania and go all the way to Sturgis SD and enjoy the Freedom to Choose. That is over 1800 miles one way! I have personally done it several times and have thoroughly enjoyed the ride! So far, Idaho is my furthest destination away from home while riding.

Here are a few facts about **FREEDOM OF CHOICE** states. Many of these events have attendance in the hundreds of thousands of bikers. Think about those tourism dollars.

Major US Motorcycle Rally locations:

- Daytona Bike Week - ***Florida: FREEDOM TO CHOOSE***
- Laconia Bike Week – ***New Hampshire: FREEDOM TO CHOOSE***
- Myrtle Beach Bike Week – ***South Carolina: FREEDOM TO CHOOSE***
- Republic of Texas Bike Rally - ***Texas: FREEDOM TO CHOOSE***
- Hog Rock - ***Illinois: FREEDOM TO CHOOSE***

- Sturgis Motorcycle Rally – ***South Dakota: FREEDOM TO CHOOSE***
- Bikes, Blues & BBQ - ***Arkansas: FREEDOM TO CHOOSE***

One more group of parting thoughts, as provided to us from ABATE of Arkansas:

- Why are motorcyclists the ONLY operators and, or passengers of any motorized form of transportation used on public highways and streets that are required by law to wear a crash helmet?
- Why would auto drivers and passengers NOT be required to wear helmets if in fact "safety and reduction of injuries" is the public concern of the helmet issued mandated to motorcyclists?
- Why aren't mandatory motorcycle helmet laws considered selective, class discrimination?
- Why are motorcycle accidents victims seen, as a whole, by the medical profession to be "Burdens to Society" whereas the auto accident victims with similar injuries are not?
- Why does the non-motorcycling public perceive us as "bikers only," when in fact our motorcycles are usually in addition to what the non-motorcycling public has or does, which means we also have jobs, kids, homes, and insurance?
- Why is it OK for un-helmeted people to ride around in a convertible auto with the top down while playing bumper cars in traffic and it is NOT OK for an un-helmeted motorcyclist to do the same thing? *(or some autocycles, scooters, golf carts, UTV's, microcars, etc.)*
- Why does the state mandate safety equipment usage with a penalty for non-compliance, while at the same time refuses to be held liable for injuries one might receive in an accident because of and due to compliance with the law?

We are not asking to make motorcycle helmets illegal in Maryland. We are asking that experienced adult riders be provided the **FREEDOM OF CHOICE** regarding helmet usage. I suspect that just like in many other states, there will be a pretty varied range of helmet usage. Some will always wear helmets, some will never wear helmets, and some will wear a helmet when they feel appropriate.

I have attached two documents along with my testimony:

- Traffic Crash & Injury Data, prepared by ABATE of Maryland, Inc, dated January 2055
- Position Paper in Favor of SB503 & HB639 (2024), prepared by Dean Howes, ABATE of Maryland, Inc. – Calvert County

There is some interesting data and positions in both of these documents. If you have any questions, please feel free to reach out to us to discuss. We urge the committee to consider a **Favorable** vote on **SB397** and move it to the Senate floor for a vote.

Thank you!

Kenneth B. Eaton, Executive Director
ABATE of Maryland, Inc.
Tel: 410-263-9185 (office)
Tel: 410-924-3374 (mobile)

ABATE OF MARYLAND, INC.

Dedicated to Freedom of the Road & Responsible Motorcycle Legislation Since 1974

Traffic Crash & Injury Data

Prepared by:

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Annapolis, MD 21401
Tel: 410-263-9185
www.abateofmd.org
info@abateofmd.org

In SUPPORT of
SB0397: Motorcycles - Protective Headgear Requirement – Exception
(In Remembrance of Gary "Pappy" Boward)

Date:

January 2025

Maryland Motorist & Registration Data

Total number of motor vehicle registrations (2018-2023 average-MD CRASH):	5,090,649
Total number of motorcycle registrations (2018-2023 average-IIHS)	119,139

Maryland CRASH Data

(MDOT CRASH Dashboard data comes from the Maryland Department of State Police Automated Crash Reporting System (ACRS) and the MDSP Data Warehouse

The following data is provided by the MD DOT Crash Data Dashboard, yearly average, years 2018 thru 2023).

Total Vehicle FATAL Crashes	558 (100%)
Total Motorcycle FATAL Crashes	74 (13.3%) *
Total Pedestrian FATAL Crashes	132 (23.6%)
Total Injury Crashes	29,680 (100%)
Injury Crashes – Motorcycle	935 (3.15%) **
Injury Crashes - pedestrians on foot	2,430 (8.19%)
Injury Crashes - Bicycle or pedalcycle	612 (2.06%)

** The national statistics provided by NHTSA indicate that on average, 14.1% of the FATAL crash victims in the US are motorcyclists annually, based upon data from 2010 thru 2020.*

*** The national statistics provide by NHTSA indicate that on average, 3.5% of the INJURY crash victims in the US are motorcyclists annually, based upon data from 2010 thru 2020.*

Maryland Crash Data Review

0.011% of the motor vehicles registered in Maryland are involved in FATAL CRASHES

0.58% of the motor vehicles registered in Maryland are involved in INJURY CRASHES

3.15% of the total INJURY CRASHES in MD involve MOTORCYCLES

8.19% of the total INJURY CRASHES in MD involve PEDESTRIANS ON FOOT

2.06% of the total INJURY CRASHES in MD involve BICYCLES OR PEDALCYCLES

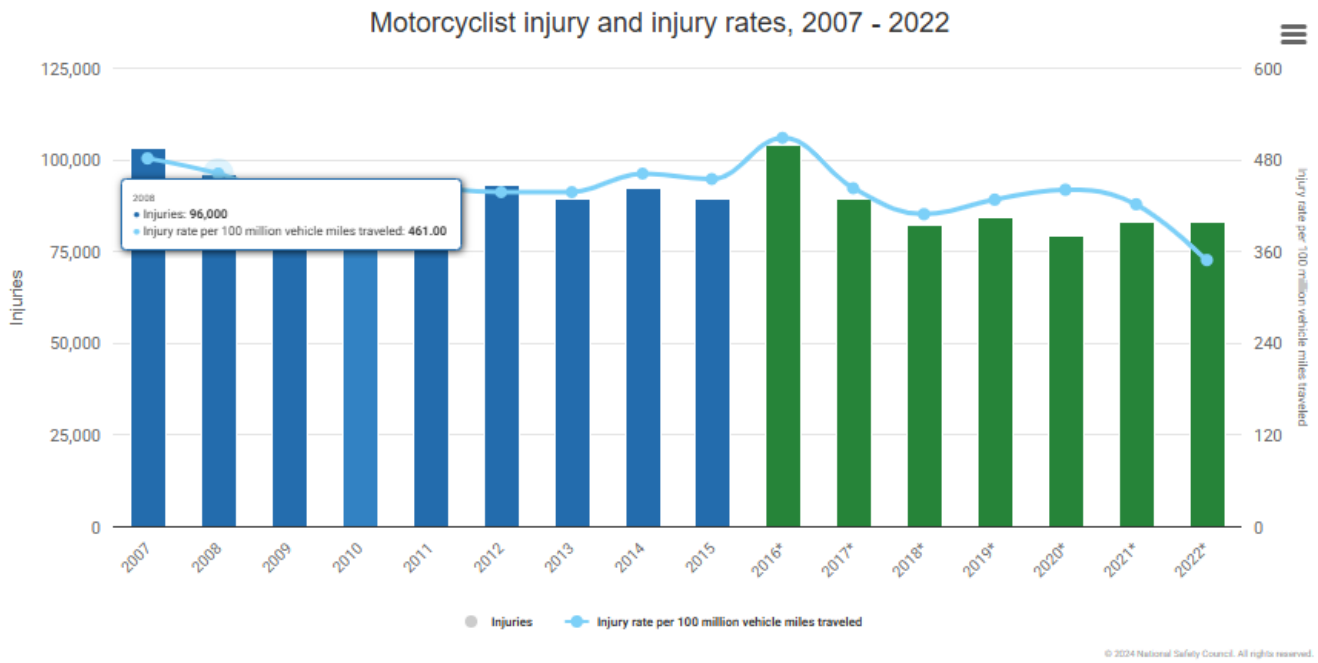
10.25% of the total INJURY CRASHES in MD are NONOCCUPANTS

(NONOCCUPANTS = PEDESTRIANS + BICYCLE OR PEDALCYCLE)

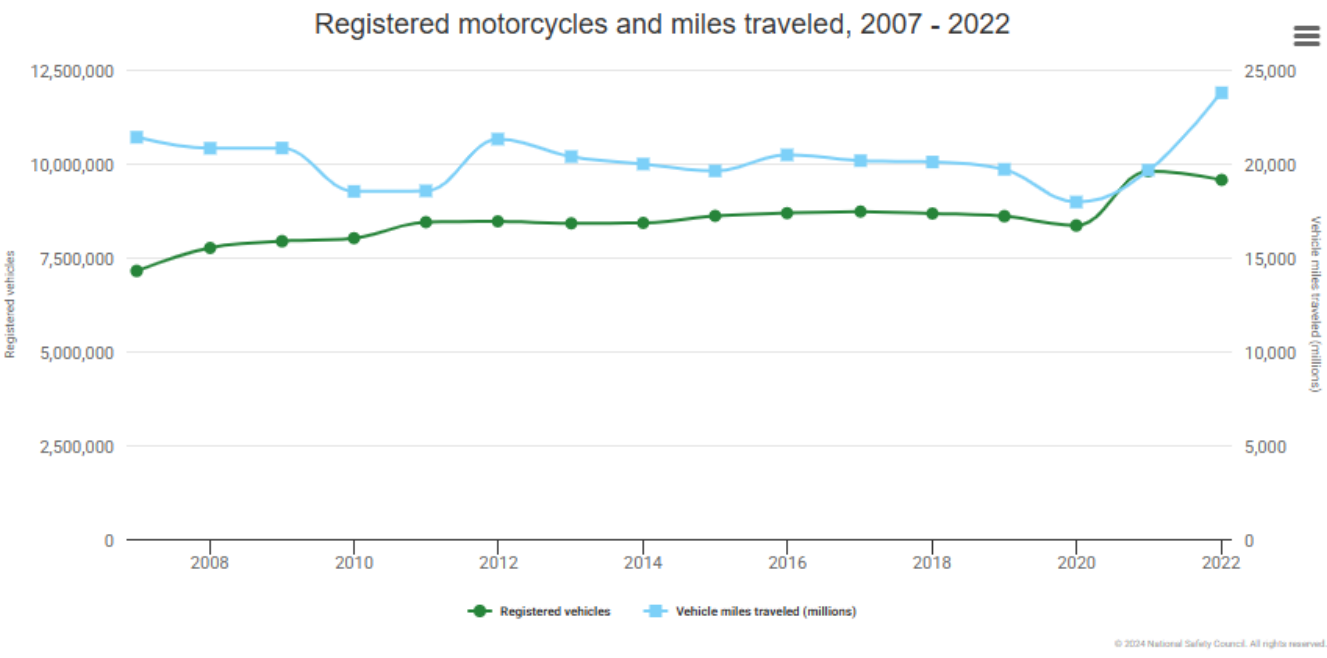
NONOCCUPANTS are 3.2 times more likely to be involved in an INJURY CRASH in Maryland than MOTORCYCLISTS.

** The data summary here assumes all classifications in crashes are Maryland registered vehicles. In reality, the crash data includes out-of-state vehicles, and the numbers / percentages would actually be lower*

National Safety Council Data (for the entire US)



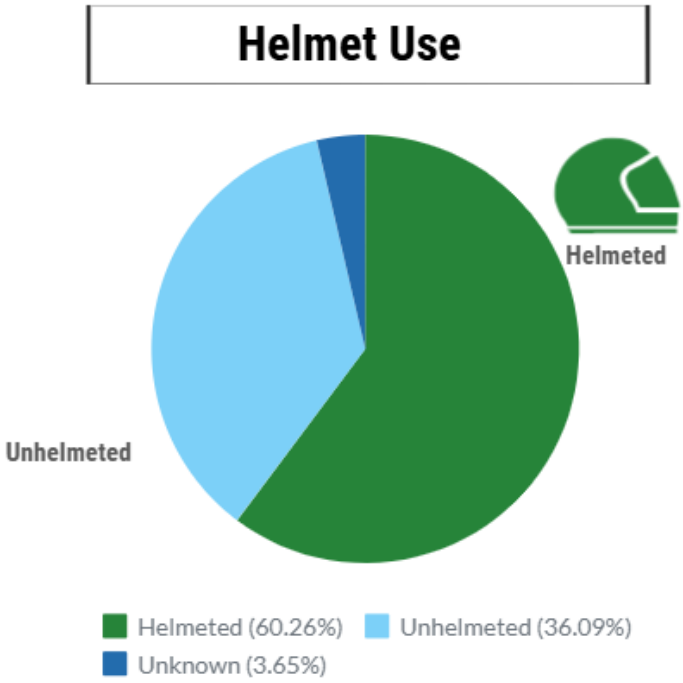
Nationwide, over a period of 15 years, motorcyclists' injury crashes have reduced.



Nationwide, over a period of 14 years, motorcyclists' Vehicle Miles Traveled have remained consistent, with the exception of the time period from 2020 to 2022, where the VMT and the number of registered motorcycles has increased.

National Safety Council Data (for the entire US) - continued

MOTORCYCLE TRAFFIC DEATH OVERVIEW, 2022



In 2022, the states that experienced the MOST MOTORCYCLE DEATHS were:

Florida (668)
California (634)
Texas (564)
Arizona (232)
Georgia (221)
North Carolina (220)

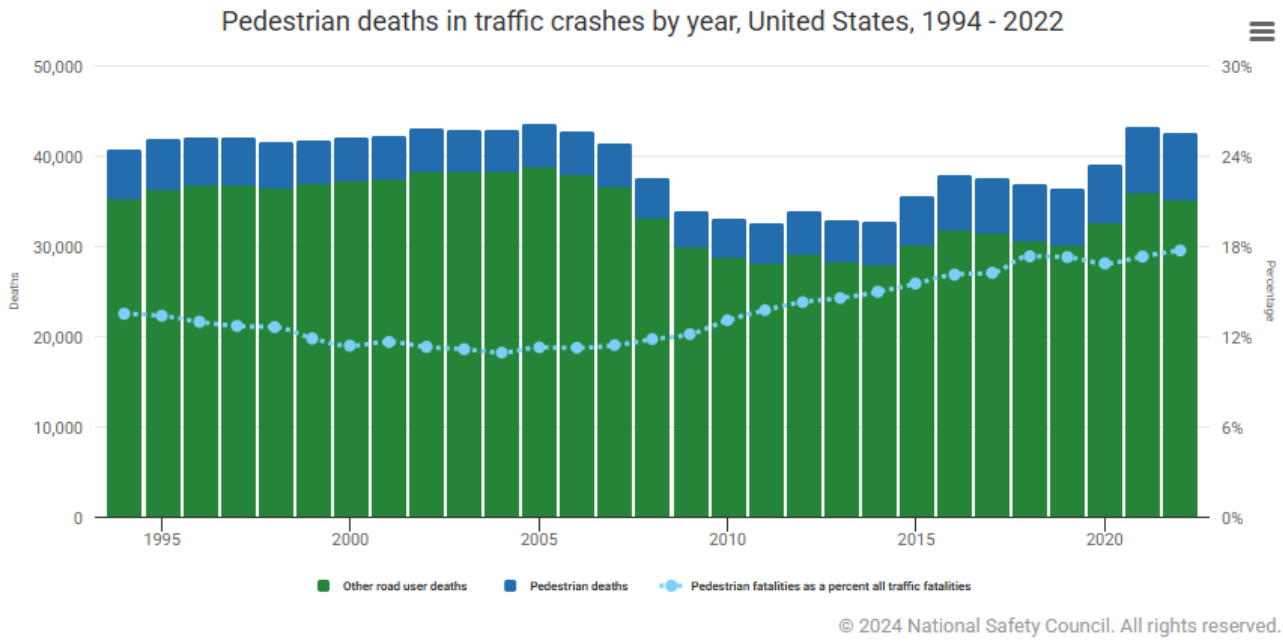
Helmet Mandate states

In 2022, four states and the District of Columbia EXPERIENCED FEWER THAN 20 MOTORCYCLE DEATHS:

District of Columbia (4)
Alaska (8)
Rhode Island (10)
South Dakota (13)
Vermont (14)

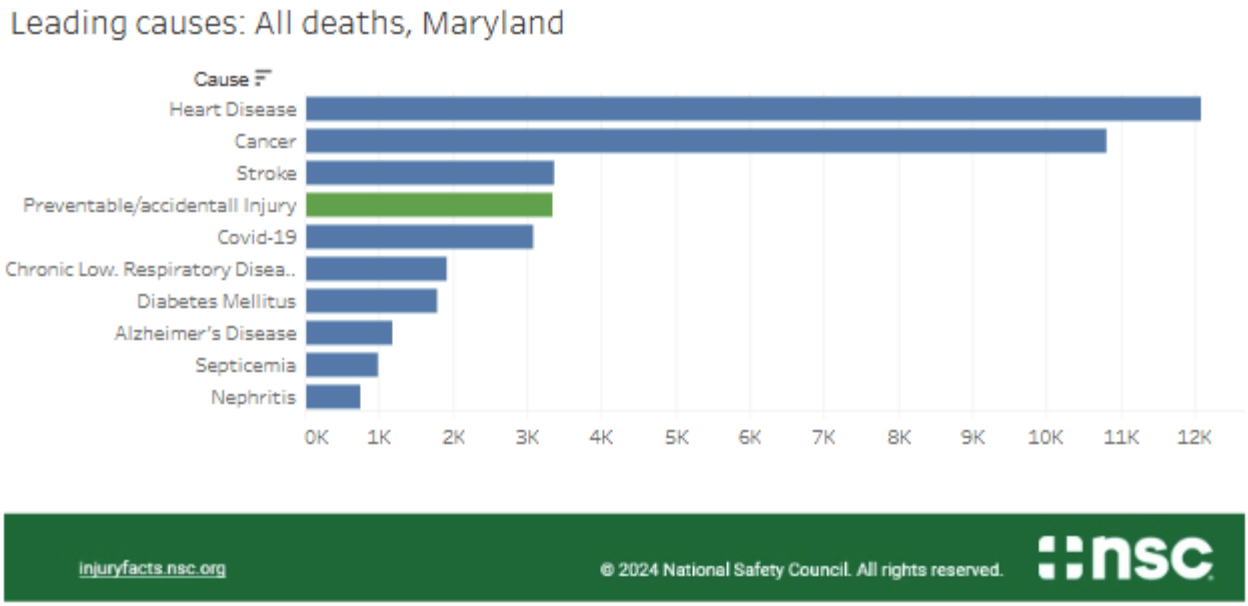
Freedom of choice states

National Safety Council Data (for the entire US) - continued



Nationwide, over a period of 28 years, pedestrian deaths in traffic crashes have increased.

NSC DATA – MARYLAND ONLY



"PREVENTABLE/ACCIDENTAL INJURY" includes motor vehicle accidents, falls at home, sports injuries, etc.

Common Causes of Traumatic brain injury

Falls lead to nearly half of the TBI-related hospitalizations

Firearm-related suicide is the most common cause of TBI-related deaths in the United States

Motor vehicle crashes and assaults are other common ways a person may get a TBI

NHTSA CRASHSTATS DATA

NATIONAL STATISTICS

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	
POLICE-REPORTED MOTOR VEHICLE TRAFFIC CRASHES												
Fatal	35,766	33,487	33,919	34,560	34,748	32,538	30,056	30,202	31,006	29,867	30,296	32,404 Average
Injury	1,593,390	1,916,344	1,893,704	1,888,525	2,116,308	1,715,394	1,647,726	1,591,016	1,634,180	1,529,968	1,542,104	1,733,514 Average
Property-Damage-Only	3,621,681	4,806,253	4,807,058	4,529,513	4,670,073	4,548,203	4,386,502	4,065,673	3,949,858	3,777,994	3,847,045	
Total	5,250,837	6,756,084	6,734,681	6,452,598	6,821,129	6,296,134	6,064,284	5,686,891	5,615,045	5,337,829	5,419,445	
TRAFFIC CRASH VICTIMS: FATALITIES												
Occupants	25,536	23,891	24,332	25,130	25,276	23,899	22,307	22,483	23,017	22,510	23,371	23,796 Average
Drivers	19,519	17,984	18,321	18,819	18,717	17,615	16,470	16,520	16,838	16,474	16,864	17,649 Average
Passengers	5,966	5,846	5,962	6,237	6,485	6,213	5,766	5,896	6,106	5,972	6,451	
Unknown	51	61	49	74	74	71	71	67	73	64	56	
Motorcyclists	5,579	5,044	5,038	5,226	5,337	5,029	4,594	4,692	4,986	4,630	4,518	4,970 Average
Nonoccupants	7,709	7,420	7,465	7,117	7,193	6,556	5,843	5,718	5,779	5,339	5,110	6,477 Average
Pedestrians	6,516	6,272	6,374	6,075	6,080	5,494	4,910	4,779	4,818	4,457	4,302	
Pedalcyclists	938	859	871	806	853	829	729	749	734	682	623	
Other/Unknown	255	289	220	236	260	233	204	190	227	200	185	
Total	38,824	36,355	36,835	37,473	37,806	35,484	32,744	32,893	33,782	32,479	32,999	
Percentage of motorcyclists : Fatalities	14.4%	13.9%	13.7%	13.9%	14.1%	14.2%	14.0%	14.3%	14.8%	14.3%	13.7%	14.1% Average
Percentage of nonoccupants: Fatalities	19.9%	20.4%	20.3%	19.0%	19.0%	18.5%	17.8%	17.4%	17.1%	16.4%	15.5%	18.3% Average
TRAFFIC CRASH VICTIMS: INJURED												
Occupants	2,093,246	2,516,003	2,491,630	2,523,274	2,791,199	2,240,578	2,125,137	2,104,828	2,140,173	2,019,259	2,035,571	
Drivers	1,545,689	1,857,836	1,808,088	1,815,719	2,003,557	1,610,337	1,525,693	1,454,243	1,492,293	1,419,969	1,435,324	
Passengers	546,822	657,215	680,789	707,219	786,900	629,473	599,277	650,320	647,242	598,731	599,870	
Unknown	735	952	2,752	336	742	768	167	264	638	559	377	
Motorcyclists	82,528	83,814	81,859	88,592	104,442	88,738	91,987	88,760	93,251	81,706	82,300	87,998 Average
Nonoccupants	106,241	140,324	136,570	133,401	166,245	125,463	125,497	125,404	135,659	126,243	130,117	131,924 Average
Pedestrians	54,769	75,650	75,157	71,290	86,399	70,077	65,072	65,929	76,129	69,036	70,267	
Pedalcyclists	38,886	49,057	46,536	49,698	64,218	45,066	50,414	48,088	49,300	48,134	51,688	
Other/Unknown	12,586	15,617	14,877	12,414	15,628	10,319	10,010	11,387	10,231	9,073	8,162	
Total	2,282,015	2,740,141	2,710,059	2,745,268	3,061,885	2,454,778	2,342,621	2,318,992	2,369,083	2,227,209	2,247,988	
Percentage of motorcyclists injured	3.6%	3.1%	3.0%	3.2%	3.4%	3.6%	3.9%	3.8%	3.9%	3.7%	3.7%	3.5% Average
Percentage of nonoccupants injured	4.7%	5.1%	5.0%	4.9%	5.4%	5.1%	5.4%	5.4%	5.7%	5.7%	5.8%	5.3% Average
OTHER NATIONAL STATISTICS												
Vehicle Miles Traveled (Millions)	2,903,622	3,261,772	3,240,327	3,210,248	3,173,815	3,089,841	3,020,377	2,982,941	2,963,497	2,945,194	2,967,266	
Resident Population	329,484,123	328,329,953	326,838,199	325,122,128	323,071,755	320,738,994	318,386,329	316,059,947	313,877,662	311,583,481	309,327,143	
Registered Vehicles	297,644,334	299,267,114	297,036,214	290,335,891	288,033,900	281,312,446	274,804,904	269,294,302	265,647,194	265,043,362	257,312,235	
Licensed Drivers	228,195,802	228,915,520	227,558,385	225,346,257	221,711,918	218,084,465	214,092,472	212,159,728	211,814,830	211,874,649	210,114,939	
NATIONAL RATES: FATALITIES												
Fatalities per 100 Million Vehicle Miles Traveled	1.34	1.11	1.14	1.17	1.19	1.15	1.08	1.10	1.14	1.10	1.11	
Fatalities per 100,000 Population	11.78	11.07	11.27	11.53	11.70	11.06	10.28	10.41	10.76	10.42	10.67	
Fatalities per 100,000 Registered Vehicles	13.04	12.15	12.40	12.91	13.13	12.61	11.92	12.21	12.72	12.25	12.82	
Fatalities per 100,000 Licensed Drivers	17.01	15.88	16.19	16.63	17.05	16.27	15.29	15.50	15.95	15.33	15.71	
NATIONAL RATES: INJURED PERSONS												
Injured Persons per 100 Million Vehicle Miles Traveled	79	84	84	86	96	79	78	78	80	76	76	
Injured Persons per 100,000 Population	693	835	829	844	948	765	736	734	755	715	727	
Injured Persons per 100,000 Registered Vehicles	767	916	912	946	1,063	873	852	861	892	840	874	
Injured Persons per 100,000 Licensed Drivers	1,000	1,197	1,191	1,218	1,381	1,126	1,094	1,093	1,118	1,051	1,070	

Note: The above Injured People and Property-Damage-Only, Injury, and Total crash numbers are not actual counts, but estimates of the actual counts. The estimates are calculated from data obtained from a nationally representative sample of crashes collected through NHTSA's NASS General Estimates System (GES) and Crash Report Sampling System (CRSS).

Sources: Crashes, Fatalities, Injured, and Costs - National Highway Traffic Safety Administration.

Population – U.S. Bureau of the Census.

Vehicle Miles Traveled and Licensed Drivers – Federal Highway Administration (FHWA).

Registered Vehicles - FHWA and Polk data from R.L Polk & Co., a foundation of IHS Markit automotive solutions.

Traffic Safey Facts Annual Report, June 2022: NHTSA - CrashStats

The data compiled in this report has been obtained from the following sources:

- MDOT CRASH Dashboard: data comes from the Maryland Department of State Police Automated Crash Reporting System (ACRS) and the MDSP Data Warehouse
- The Insurance Institute for Highway Safety (IIHS)
- The National Highway Traffic Safety Administration (NHTSA)
- The National Safety Council (NSC)

Summary

In Maryland, motorcyclists are NOT involved in 87% of the FATAL Crashes. They are also NOT involved in 97% of the INJURY crashes. This is consistent with the nationwide average of motorcyclists NOT being involved in 86% of the FATAL crashes and NOT involved in 96% of the INJURY crashes, based upon data from the NHTSA.

Nationwide data includes data from all 50 states. What that really says is as follows:

- 33 States allow the Freedom of Choice regarding motorcycle helmets (65%)
- 18 states + DC have a helmet mandate in place (35%)
- Nationwide, 60.26% of all motorcycle fatalities are motorcyclists wearing helmets

Facts

Motorcycle helmets DO NOT PREVENT ACCIDENTS. Motorcycle safety training and education PREVENT ACCIDENTS from happening. However, in Maryland, the motorcycle safety training & education courses are **significantly** more expensive than our neighboring states. We are currently working with the safety program and some legislative representatives to determine why the cost has risen so much compared to neighboring states. A brief summary is provided below:

Average cost of a Basic Rider Course (BRC):

- Maryland: $362
- Delaware $50 *
- Pennsylvania: $FREE *

* As an out-of-state resident, you can go to both Delaware & Pennsylvania and take the BRC for significantly less than a resident of Maryland can take it in Maryland.

In 2022, 50% of the states that had the most motorcycle crash related FATALITIES were states with MANDATORY HELMET LAWS.

Also in 2022, 60% of the states/DC that had fewer than 20 motorcycle crash related FATALITIES were states with where motorcyclists were provided with the FREEDOM OF CHOICE.

Motorcyclists are the only registered drivers on the road that are required to purchase additional safety equipment after they have purchased their vehicle. The states that require helmet mandates are requiring and additional purchase, not included in the purchase of a new or used motorcycle, in order to operate the motorcycle on the roadways. Helmets come in a wide variety of shapes, sizes and cost. The average helmet cost $250. The cost can go up to over $1000 for some motorcycle helmets. In addition, over time, they deteriorate, and most manufacturers recommend replacement every 3 to 5 years. Some manufacturers recommend getting your helmet inspected, and possibly replaced, after dropping in on a hard surface from a distance of just 3 feet.

Motorcycle helmets are typically tested and designed to withstand impacts at speeds ranging between 11-17 mph (5.2-7.5 meters per second), with most standards using impact speeds within the 9-16 mph range, depending on the specific test protocol and certification body like DOT, Snell, or ECE. So, unless you are involved in a crash in your driveway or in a parking lot, you are normally exceeding the speeds that “safety device” was tested.

Helmet Requirements in Maryland

Motorcycle Riders: DOT Approved, FMVSS No. 218 certification required

- Required for all motorcycle riders on public roadways

Horseback rider: ASTM F1163-23 – Standard Specification for Protective Headgear Used in Horse Sports and Horseback Riding

- Required for minors on horses, donkeys, mules and ponies on a public riding trail or pathway
- Not required for a minor crossing a public highway, engaging in an ag practice, or receiving therapy services from a licensed medical provider and for who an alternative helmet is necessary, and is in compliance with the Professional Association of Therapeutic Horsemanship International Guidelines for Alternative Helmet Use

Bicyclists: ANSI Z90.4, Snell Memorial Foundation, ASTM F1447 for protective headgear for use in bicycling

- Required for any riders under the age of 16
- Exemptions: Ocean City on the boardwalk

Jet Pack Vessels: Required for all jet pack users / operators

- According to the MD DNR, it must be a "water sports helmet", but there is no known specification or testing requirement

Parasailing: No requirement

Skiing and Snowboarding: No requirement

In Maryland, the ***only*** activity requiring mandatory helmet use for adults, with a specific testing / certification, is motorcycling.

Observations

Motorcyclists' that have been riding for many years have obviously gone to funerals for family members and friends that have passed on. However, ALL of us have lost significantly more family members and friends to heart disease, cancer, strokes, etc., than we have from motorcycle accidents.

Experienced riders have the skill sets to automatically react to situations that they encounter on the roadways. It is pretty hard to explain, but in most challenging situations, all you can rely on is your riding experience and reaction.

Based upon observations in FREEDOM Of CHOICE states, helmet usage varies greatly. It appears that some riders will always wear them, some will never wear them, and some riders will wear them when they feel that they want it. There does not appear to be any significant statistical information that indicates that helmet mandates change the fact that approximately 14% of all fatal accidents nationwide on the roadways involve motorcycles. In fact, in 60% of all FATAL MOTORCYCLE accidents, the riders were wearing a motorcycle helmet. Interestingly enough, the percentage of motorcyclists injured in crashes amounts to only 3.5% of the total injury crashes.

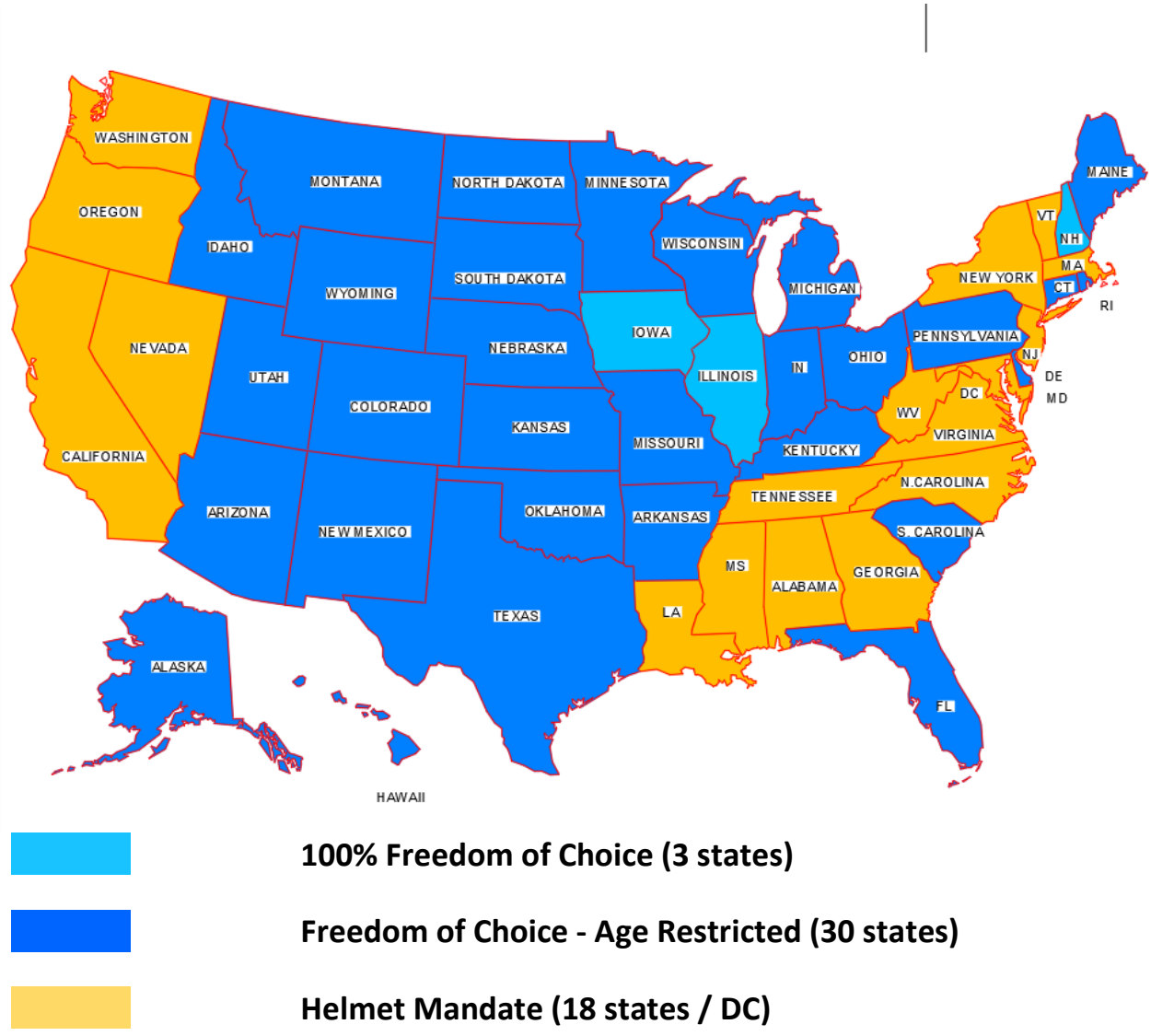
Motorcycle Safety Training & Awareness

ABATE of Maryland, Inc. was instrumental in starting the Motorcycle Safety Program, many years ago, in Maryland, as well as assisting our neighboring states get their programs up and running. Many

of our members are certified motorcycle safety training instructors. Our members have joined together to advocate training as the foremost means of reducing accidents and injury. We work together with the safety program to make sure that a portion of the funds collected from motorcycle registrations are used for motorcycle safety and awareness. Our goal is to provide information and training to riders and to the general driving public, to prevent accidents from happening.

Currently in the US, the motorcycle laws are as follows:

33 states currently allow FREEDOM OF CHOICE to motorcyclists'



Testimony for SB397.pdf
Uploaded by: Mike McKay
Position: FAV

MIKE MCKAY
Legislative District 1
Garrett, Allegany, and Washington Counties

Judicial Proceedings Committee
Executive Nominations Committee

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THE SENATE OF MARYLAND
ANNAPOLIS, MARYLAND 21401

Senate Bill 397 – Vehicle Laws – Protective Headgear Requirement for Motorcycle Rides – Exception (In Remembrance of Gary "Pappy" Boward)

February 18, 2024

Dear Chairman Smith, Vice Chairman Waldstreicher, and Members of the Committee,

Senate Bill 397 exempts individuals from the requirement of wearing helmets or other protective headgear if they meet any of three criteria. They must be an individual 21 years of age or older and either: have been licensed to drive a motorcycle for two years, completed a motorcycle safety course that has been approved by the State of Maryland, or is a passenger on a motorcycle being driven by an individual already meeting the previously mentioned criteria.

The AMA (American Motorcyclists Association) and ABATE of Maryland, Inc fully support this piece of legislation. Mandatory helmet laws do not prevent crashes as much as we wish them to. A helmet alone is not sufficient to prevent injuries. Other measures such as better education to improve the skills of motorcyclists reduce accidents much more than just safety equipment. I do believe that as adults we can make proper safety decisions.

In Pennsylvania, there is Freedom of Choice law regarding helmet usage. Of the 372,000 registered motorcyclists, 2021 saw just 3,580 total motorcycle crashes. That is exactly .96% of registered motorcycles. In contrast Mississippi, is a mandatory helmet state and they have the highest death rate of

motorcyclists in the country with 12 per 10,000. This only shows that it does not matter whether safety is legislated or not, but whether personal responsibility is taken.

Thank you very much and I ask for a favorable report.

Sincerely,

Senator Mike McKay

Representing the Appalachia Region of Maryland

Garrett, Allegany, and Washington Counties

Maryland helmet testimony.pdf
Uploaded by: Traci Beaurivage
Position: FAV

January 31, 2025

Bill: SB 0397 - Vehicle Laws- Protective Headgear Requirement for Motorcycle Riders-
Exception

Position: SUPPORT

Committee: Senate Judicial Proceedings

Dear Chair, Vice-Chair, and Members of the Committee:

I am the President of New Hampshire Motorcyclists' Rights Organization and a member of ABATE of Maryland.

I am writing in support of SB 0397. There are currently 31 states that allow adults to make the choice of helmet use. This bill would give the riders of Maryland the right to choose.

I also chair the NH Motorcycle Safety Task Force, and we dive into the data and statics of crashes and fatalities. The data does not show that helmet use should be mandated. We believe that educating riders is a far better way to help them make the right choices based on their experience.

SB 0397 recognizes that this choice belongs to the individual motorcyclist.

Using Statistics to Support Helmet Laws is very misleading and does not give the actual data on the causation of death, only that the rider was not wearing a helmet. The real data is in the reports that are done afterwards and what we

see is that most of the deaths are caused by internal injuries, not lack of helmet use.
I ask that you consider supporting this bill and allowing the adult rider with the education to make an informed decision for themselves on helmet use.

Thank you for your time.

Respectfully,

Traci Beaurivage
President
New Hampshire Motorcyclists' Right Organization

2025_SB397_BIAMD_Unfavorable.pdf
Uploaded by: Bryan Pugh
Position: UNF

Date: January 31, 2025 **Hearing Date: February 4, 2025**

Committee: Senate Judicial Proceedings Hearing

Bill: Senate Bill 0397 – Motorcycles – Protective Headgear Requirements – Exception

Position: Oppose and Request Unfavorable Report

Submitted by:
Bryan Thomas Pugh
Brain Injury Association of Maryland
2200 Kernan Dr.
Baltimore MD 21207

Our organization:
The Brain Injury Association of Maryland (BIAMD) is a 42-year-old organization providing education, advocacy, and research. We operate an information & assistance hotline, work with over 100 clients in case management, host a yearly conference on brain injury, and advocate for policies that are means tested to improve the life of people suffering from Traumatic Brain Injuries (TBI) and Acquired Brain Injuries (ABI). We are writing a letter in opposition to this bill, after speaking with numerous Marylanders injured in motorcycle crashes and their family members, and reviewing the extensive data associated with other states that have passed similar legislation.

Rationale:
According to a recent study on the Insurance Institute for Highway Safety/Highway Loss Data Institute website, If all states had all-rider helmet laws throughout the 1976–2022 study period, 22,058 fewer motorcyclists would have died in crashes. This represents 11% of all motorcyclist fatalities during these years. The number of motorcyclists killed in 2022 would have been 10% lower. Additionally, advocates for Highway & Auto Safety, the National Highway Traffic Safety Administration (NHTSA) estimated that roughly helmets save over 1600 lives each year in America. But they also indicate that motorcyclist wearing helmets reduce the rate of head injury in the event of a crash by 69%. In 2013 alone, there were 88,000 motorcycle accidents that led to injuries alone. In every states that have passed similar legislation, we have seen an increase in deaths and brain injuries associated with motorcycle accidents.

Reviewing this data, we see that Kentucky's motorcycle deaths increased by 50%, Texas saw a 31% increase, and Louisiana's saw a 100% increase in motorcycle deaths. For Louisiana, after a decade, they repealed this law to require helmets. This also greatly reduces the percentage of people who survive motorcycle accidents in these states. For instance, Michigan saw a survival rate of motorcycle accidents from 98% to 74% after just one year of this

legislation. The federal government, in a NHSTA article calculates that wearing a helmet reduces the overall risk of dying in a crash by 37%. With the same study stating that rider without a helmet is three times more likely to sustain a traumatic brain injury in the event of a crash.

It's for all of these reasons that The Brain Injury Association of Maryland has opposed this bill and every iteration this change in statute has been proposed. This legislation would statistically raise the rate of death per motorcycle accident, increase the number of deaths in motorcycle accidents yearly, increase the number of TBIs acquired by motorcycle riders, and would encourage people to put themselves at unnecessary risk. Brain injury is a "community injury" in that it not only affects the injured individual, it affects their loved ones and friends, their employers if they have jobs, their places of worship if they are active, and the other activities in the community in which they are involved.

In 2025, particularly during these challenging financial times, Maryland does not have the necessary resources to take care of everyone with brain injuries already living in the state, and all this legislation would accomplish is exacerbating these issues for no practical reason. For the same reason, we are not arguing we should allow people to drive vehicles without a seatbelt, or allow people to drive their vehicles while intoxicated, nor should we advocate for needlessly burdening our hospital systems or social safety net with an unnecessary increase in deaths and brain injuries.

We respectfully request that this Committee issue an Unfavorable report on this bill.

Resources:

The human cost of allowing unhelmeted motorcycling in the United States

Deaths Soar After Repeal of Motorcycle Helmet Law - The New York Times (nytimes.com)

https://pubmed.ncbi.nlm.nih.gov/33108139/

https://one.nhtsa.gov/people/injury/pedbimot/motorcycle/kentuky-la03/index.html

https://www.iihs.org/topics/bibliography/ref/928

Evaluation of Motorcycle Helmet Law Repeal in Arkansas and Texas (bts.gov)

SB0397_UNF_MedChi, MDACEP_Motorcycles - Protective
Uploaded by: Danna Kauffman
Position: UNF

MedChi

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Maryland Chapter
AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

Senate Judicial Proceedings Committee
February 4, 2025
Senate Bill 397 – *Motorcycles – Protective Headgear Requirement – Exception (In Remembrance of Gary "Pappy" Boward)*
POSTION: OPPOSE

On behalf of MedChi, The Maryland State Medical Society and the Maryland Chapter of the American College of Emergency Physicians, we submit this letter of opposition for Senate Bill 397.

Senate Bill 397 proposes to make certain exceptions to the current motorcycle helmet law provided an individual is at least 21 years old and has been licensed to operate a motorcycle for at least 2 years, has taken an approved motorcycle rider safety course, or is a passenger on a motorcycle operated by an individual who has been licensed for 2 years or has taken an approved safety course.

The opponents to Maryland's motorcycle helmet requirements have tried to repeal the requirements for a number of years under different proposed exceptions, to no avail. Senate Bill 397 is clearly aimed at the same objective in a manner that appears to respond to concerns about rider safety.

There is no ambiguity in the data related to the benefits of mandatory helmet laws. In Maryland, the incidence of injury and death decreased dramatically following the passage of the current helmet requirements. No benefit can be gained by putting individuals at risk just because they may have been licensed for more than 2 years or have taken an approved safety course. For these reasons, we urge an unfavorable report.

For more information call:
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SB397_OPP Testimony_Schwartzbauer MD.pdf
Uploaded by: Gary Schwartzbauer
Position: UNF

OPPOSITION Testimony of
Gary Schwartzbauer MD PhD
Associate Professor
Medical and Surgical Director of the Neurotrauma Center
Co-Director Neurotrauma Recovery Clinic
Director of Clinical Operations and Performance
Department of Neurosurgery and
Department of Orthopaedics
Program in Trauma
R Adams Cowley Shock Trauma Center
University of Maryland School of Medicine

Senate Bill 397
Feb 4, 2025

Before the
Judicial Proceedings Committee
Chair William C Smith Jr

Chair Smith and Respected Delegates:

My name is Gary Schwartzbauer and I am the Director of the Neurotrauma Center at the R Adams Cowley Shock Trauma Center and I am opposed to the passage of Senate Bill 397.

Patients arrive at Shock Trauma in a large busy area called the Trauma Resuscitation Unit. There the trauma attending on call carries a 2-way radio where you can hear the incoming calls for help from all around the state. It gives me a great sense of pride to hear the attending say “Shock Trauma online,” because I know those three words are a lifeline to the patient, and I also know that when I hear the three words “motor cycle crash,” that lifeline is even more critical.

As a neurosurgeon I am sometimes called upon to take the skull off a swollen brain of an injured motorcycle rider. This surgery, called a decompressive craniectomy can be life-saving but creates a large defect on the entire side of the head that is disfiguring and leaves the soft brain under the skin unprotected. If they survive, patients need to wear a protective helmet until the bone is put back months later, if ever. So you can wear a helmet now or helmet later. As a critical care intensivist I care for these same patients in the Neurotrauma ICU, deciding on ways to treat their pain, making them comfortable on a ventilator, finding the best way to feed them and to keep their bodies from wasting away and succumbing to overwhelming infections as they often can’t care for themselves. Among many such patients, I am haunted by a 10 year old son brought to a

dying patient's bedside asking innocently and repeatedly for his father to wake up, not knowing that moments before, our care team had discussed with the family that the patient would die despite all we could do. He was an illegally unhelmeted motorcycle rider that lost control of his bike.

The foundations of Senate Bill 397 are predicated on false assumptions as outlined in my written testimony.

The mandatory motorcycle helmet law is not a freedom of choice, it is a matter of sound public policy and all rider motorcycle helmet laws should remain intact. The Maryland Court of Appeals has also previously upheld Maryland's All Rider Helmet Law.

I thank you for your time and consideration.

(STOP ORAL)

Seante Bill 397 seeks to reverse mandatory helmet use for riders over the age of 21 who have been licensed for over two years and who have completed a motorcycle rider safety course. The provisions in the bill as proposed suggest that:

1. Riders over the age of 21 who have been licensed more than two years are less likely to incur a motorcycle crash, brain or other bodily injury, and that
2. Riders who have taken a motorcycle rider safety course are less likely to crash or to sustain injuries.

The problem with the premise of this bill is that these specifications are not supported by the national nor by the State of Maryland data AND that these assumptions are clearly false.

THE FACTS ARE:

Assumption: Older, more experienced riders are less likely to crash and die. FALSE. The average age of motorcycle fatalities is increasing. In 1975 those 29 or younger composed 80% of motorcycle fatalities and in 2017 only 28%. Forty-three was the average age of a motorcyclist killed in a collision in 2016[1]

Assumption: Riders who have taken a safety course are less likely to crash. FALSE. A Cochrane Review in 2010 of 23 research studies including 3 randomized trials could not conclude that motorcycle rider training prevents crashes.[2]

Assumption: Deaths and costs to the State and Society increase when helmet laws are repealed. TRUE.

- **Motorcycle fatalities *increase* by 30% when universal helmet laws are repealed**
- **When a state repeals its helmet law or opts for less restrictive requirements, helmet use decreases and *motorcycle-related deaths, injuries, and costs increase***

- **Motorcyclists in states without universal helmet laws are more likely to**
  - die during hospitalization
  - sustain severe traumatic brain injury, and
  - be discharged to long-term care facilities
  - have twice as many cervical SPINE injuries as helmeted riders[10]
- **Non-helmeted drivers are more likely to be admitted to the hospital and to incur *twice the medical costs* compared to helmeted riders.**
  - *Costs saved* in states with a universal helmet law are, on average, nearly *four times greater* per registered motorcycle than in states without such a law
  - Unhelmeted motorcyclists account for 36% of the total motorcyclists involved in crashes, but account for *70% of the costs*
  - Unhelmeted motorcyclists are twice as likely to suffer cervical spine injuries as helmeted riders[10]
- **Therefore there is an *increased burden* of hospitalization and long-term care, adding to overall *health care costs*.**

  A study of 105 motorcyclists hospitalized at a major trauma center determined that 63% of their care was paid for by public funds, with Medicaid accounting for over half of all charges.[3]

Most importantly, the death rate in Maryland dropped by 56% (per 10,000 registered motorcycles) over a 5-year period after enactment of the all-rider law in 1992 (Autopsy Study of Motorcyclist Fatalities, 2002).

- Unhelmeted motorcycle riders are *twice* as likely to suffer traumatic brain injuries from crashes.[4,5,6,7]
- The median hospital charges for motorcycle riders hospitalized with severe traumatic brain injuries were 13 times higher than the charges for those who did not have a traumatic brain injury.[5]
- Unhelmeted motorcycle riders are less likely to have health insurance and are therefore more likely to have their medical expenses paid by government-funded healthcare.[8]

The *only safety measure* that costs little to initiate and reaches all riders is a *state universal motorcycle helmet law*. It is also the only measure proven to improve motorcycle safety.[5]

TRAUMATIC BRAIN INJURY

Traumatic brain injury is a leading cause of motorcycle crash death.[9]

- Riders who do not wear helmets are more likely to suffer traumatic brain injuries, and median hospital charges for those with traumatic brain injuries are 13 times higher than for those without such injuries. (Cook 2009)

Even when not fatal, these debilitating head injuries can mean a lifetime of costly rehabilitation and severe emotional trauma for family and friends.

The effectiveness of appropriately designed motorcycle helmets in preventing and mitigating head injury is unequivocal:

- A 1991 report reviewing published studies concluded that motorcycle helmet use has lowered fatality rates, prevented serious head injuries, and reduced the need for ambulance service, hospitalization, neuro-surgical intervention, intensive care, rehabilitation, and long-term care in motorcyclist accidents.
- The 2003 independent Cochrane Review of published studies found that helmets substantially reduced the risk of head injury and fatality in motorcycle crashes, and found *no evidence* of an increased risk of any other types of injury (Liu, 2003).
- A 1996 Department of Transportation (DOT) report noted that riders not wearing helmets are three times more likely to suffer brain injury than those riders wearing helmets.
- The Crash Outcome Data Evaluation System (CODES) study found that un-helmeted motorcyclists are three times more likely to suffer brain injuries than those wearing helmets and that motorcycle helmets are 67% effective in preventing brain injuries (NHTSA, 2005).

The passage of helmet use laws governing <u>all</u> motorcycle riders is the most effective method of increasing helmet use.

SB 397 proposes to exempt riders over the age of 21 with two years' riding and having taken a motorcycle safety course from wearing helmets. *Why should we conduct this experiment on the citizens of the State of Maryland*, when it has already been done? In other states that have enacted repeals of their motorcycle helmet laws or exceptions for certain motorcyclists, there has been an overall <u>increase in fatalities</u>. Texas and Arkansas repealed all rider motorcycle helmet law and observed utilization went from 97% in each state to 66% and 52% respectively. Texas motorcycle operator fatalities rose by 31% and Arkansas motorcycle operator fatality rose by 21% (Preusser, 2000).

Louisiana's all-rider helmet repeal in 1999 caused motorcycle deaths to increase by 100 percent (NHTSA, 2003). Louisiana subsequently **re-enacted** their motorcycle helmet law and found a significant reduction in the incidence and severity of injuries to the head and a 48% decrease in the average cost per accident and the **death rate decreased by 24%**. As in Louisiana, in 24 out of 26 states there was an overall increase in fatalities after repeal of helmeted laws with the conclusion that repealed mandatory helmet laws were followed by a substantial increase in motorcycle operator fatalities. This does not even bring into account the devastating effect of these legislative actions on the increased incidence of traumatic brain injuries and the associated pure medical and societal costs due to inability to work and socialize secondary to traumatic brain injuries (Evans, 1988; Cooper, 1987; Bledsoe, 2005). A recent study commissioned by the Florida Department of Transportation shows that since Florida's repeal in 2000, motorcycle deaths have risen almost 42%.

Freedom of Choice

The opposition will bring up the issue of freedom of choice. We must consider their main arguments. Is the motorcyclist only hurting him/herself when s/he does not wear a helmet and is this a violation of personal choice/human rights… or of the constitution? The answer to these questions were handed down by The Supreme Court of the United States of America in Simon vs. Sargent 396 F. Supp. 277.279 409 US 1020 (1972) stating that *the individual was hurting citizens around him* and *that the helmet legislation was not a violation of the motorcyclists' constitutional rights*. The mandatory motorcycle helmet law is not a freedom of choice, it is a matter of sound public policy and all rider motorcycle helmet laws should remain intact. The Maryland Court of Appeals also upheld Maryland's All Rider Helmet Law.

Thank you.
Respectfully Submitted,
Gary T Schwartzbauer, MD PhD
With significant input from
Maureen McCunn, MD MIPP, FCCM

SELECTED REFERENCES

1.National Highway Traffic Safety Administration. 2018. Traffic safety facts, 2016: motorcycles. Report no. DOT HS-812-492. Washington, DC: US Department of Transportation.

2. Kardamanidis K, Martiniuk A, Ivers RQ, Stevenson MR, Thistlethwaite K. Motorcycle rider training for the prevention of road traffic crashes. Cochrane Database of Systematic Reviews 2010, Issue 10. Art. No.: CD005240.

3.Rivara FP, Dicker BG, Bergman AB, Dacey R, Herman C. The public cost of motorcycle trauma. JAMA. 1988;260(2):221–223.

4. Cook LJ, Kerns T, Burch C, Thomas A, Bell E. Motorcycle helmet use and head and facial injuries: Crash outcomes in CODES-linked data. Washington (DC): National Highway Traffic Safety Administration, U.S. Department of Transportation; 2009.

5. Shankar BS, Ramzy AI, Soderstrom CA, Dischinger PC, Clark CC. Helmet use, patterns of injury, medical outcome, and costs among motorcycle drivers in Maryland. Accid Anal Prev. 1992;24(4):385–396.

6. Governor's Traffic Safety Bureau. Motorcycle Fact Sheet. Des Moines: Iowa Department of Public Safety; 2008.

7. Mounce N, Brackett Q, Hinshaw W, Lund AK, Wells JK. The reinstated comprehensive motorcycle helmet law in Texas. Arlington: Insurance Institute for Highway Safety; 1992.

8.Hundley JC, Kilgo PD, Miller PR, Chang MC, Hensberry RA, Meredith JW, Hoth JJ. Non-helmeted motorcyclists: A burden to society? A study using the national trauma data bank. J Trauma. 2004;57(5):944–949.

9.National Highway Traffic Safety Administration. Traffic Safety Facts, 2006: Motorcycle Helmet Use Laws. Washington (DC): National Highway Traffic Safety Administration, U.S. Department of Transportation; 2007.

10. Page PS, Wei Z, Brooks NP, Motorcycle helmets and cervical spine injuries: a 5-year experience at a Level 1 trauma center, Journal of Neurosurgery: Spine, Vol. 28, No. 6, June 2018.

SB ____JBahouth_unf_2025.pdf
Uploaded by: Janet Bahouth
Position: UNF

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UNF, In Opposition, to

Senate Bill 0397 Maryland General Assembly
February 22, 2024

Statement of Janet Bahouth, D.Sc.
Injury Biomechanics and Transportation Safety Engineering, Impact Research

My name is Dr. Janet Bahouth. I am a co-owner of Impact Research – a transportation safety research and engineering firm in Columbia, Maryland. Impact Research is crash data analysis and transportation safety research that informs decisions about motor vehicle safety, roadway and traffic safety, and occupant protection. I hold a Doctor of Science degree in Transportation Safety Engineering and I am clinically trained in injury biomechanics.

As background, please refer to 2021 Maryland Statutes Transportation Title 8 – Highways Subtitle 10 - Vision Zero Section 8-1003 designating Maryland as a "Vision Zero" state where a program must exist to plan and develop a state highway roadway system that has zero vehicle-related deaths and serious injuries by 2030. Repealing Maryland's helmet law would be inconsistent with the State's Vision Zero mandate.

In the U.S., motorcycle traffic fatalities continue to be overrepresented, accounting for 14 percent of all traffic-related fatalities, while representing only 3 percent of the entire registered motor vehicle fleet. Based on this data, and other state's experience, repealing this law that saves lives would cause unintended consequence of harm.

With the Maryland Department of Transportation's Highway Safety Office and the Maryland State Police Motor Unit, I've directed research of Maryland motorcycle crashes that were fatal or caused serious injury to the rider. This was a comprehensive look at the circumstances from pre-crash, during the crash itself, and post-crash. The goal of the research aligns with ABATE's principal that risks can be mitigated through rider and driver education. Our goal was to identify those motorcycle safety concepts that, as evidenced by these riders' fatal and serious injury outcomes, need more focus and attention in rider and driver education so that the outcome of these crashes could be different. As A.B.A.T.E's principal states, and as our team of experts proved, Maryland riders would certainly benefit from this kind of education. Understanding these concepts could protect a rider, however - none of them mean anything without the proper gear, including a helmet. We can all agree that when a crash occurs, knowledge isn't going to protect anything.

A typical crash lasts 350 milliseconds. That's 1/3 of a second and is faster than the blink of an eye. The forces sustained during only a fraction of a second either ends a life, drastically changes it, or isn't enough to compromise the body due to safeguards – like seat belts, airbags, or helmets.

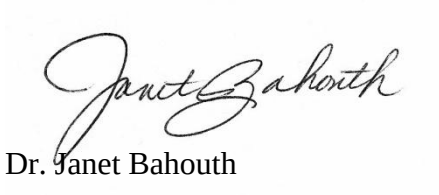
These safe guards actually limit the force that is inflicted on a body. The more force absorbed by the safeguard, the better your chances of walking away. That's the physics we can't ignore.

I agree with some principals held by the supporters of this bill. I can understand the love of riding – the sense of freedom, relishing the fresh air, and the associated cool factor. But ask any rider, and if they're being honest, they'll tell you it's not a matter of IF they crash, but WHEN. The supporters of this bill have implied that no one but the rider gets hurt. But in truth, it's the taxpayers' economy and societal costs that are hurt when we foot the 12 million dollar bill for each death on our roads.

In conclusion, by changing the all-rider helmet law, you are knowingly facilitating a rise in deaths and are in contradiction with Maryland's Vision Zero law (2021 Maryland Statutes Transportation Title 8 – Highways Subtitle 10 - Vision Zero Section 8-1003). I urge you to oppose Senate Bill 503.

Thank you for the opportunity to share my perspective.

Kind Regards,



Dr. Janet Bahouth

Human Cost of Lax Helmet Laws 2024.pdf
Uploaded by: Kathleen Hoke
Position: UNF

The human cost of allowing unhelmeted motorcycling in the United States

October 2024

Eric R. Teoh

Preprint version: This article has been submitted to a journal.

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Contents

Abstract

Introduction: This study's objective was to estimate the number of motorcyclist fatalities attributable to laws that allow unhelmeted riding in the United States since 1976.

Method: Counts of helmeted and unhelmeted motorcyclist fatalities were used to estimate population-level helmet use under all-rider helmet laws and in the absence of such laws. The number of lives that could have been saved if helmet use in states that allowed unhelmeted riding was equal to helmet use in states with all-rider helmet laws was estimated for each year and summed over the study years.

Results: If all states had all-rider helmet laws throughout the 1976–2022 study period, 22,058 fewer motorcyclists would have died in crashes. This represents 11% of all motorcyclist fatalities during these years. The number of motorcyclists killed in 2022 would have been 10% lower. Currently, 17 states and the District of Columbia have an all-rider helmet law in place.

Conclusion: Requiring helmets for all motorcyclists is a straightforward rule of the road that has the potential to reduce annual motorcyclist fatalities, which are at record-high levels of over 6,000 per year, by 10%. All-rider helmet laws are a fundamental component of a Safe System for motorcycling.

Practical Applications: States should consider the human cost of not having all-rider helmet laws and use this tool to reduce the number of riders killed in crashes.

1. Introduction

It is not news that riding a motorcycle involves more risk than traveling in a passenger vehicle and that no single countermeasure can eliminate every crash, injury, or fatality. However, that elevated risk can be reduced with the implementation of multiple effective countermeasures and by recognizing that humans make mistakes—two fundamental pillars of a line of thinking known as the Safe System approach. Motorcycling in a Safe System would involve measures that reduce the likelihood of crashing as well as measures that protect riders who do crash, and it would involve prioritizing measures that are the most effective. Unfortunately, however, the safety of motorcyclists traveling on our nation's roads has not been prioritized. The number of motorcyclist fatalities in the United States has reached a record-high for the third year in a row (Insurance Institute for Highway Safety, 2024a), despite relatively stable numbers of registered motorcycles over the past decade (Teoh, 2023b).

Wearing a helmet is one of the most fundamental countermeasures for motorcyclist fatalities. Deutermann (2004) found that helmets reduce riders' risk of dying in a crash by 37% , and other studies have shown similar benefits (Liu et al., 2004; Norvell & Cummings, 2002). Helmets also reduce the risk of traumatic brain injury by two-thirds (National Highway Traffic Safety Administration, 2008). Helmets that cover more of the face are generally more effective than those covering only the top of the head (Yu et al., 2011) and helmets that do not meet federal performance standards (specifically, 49 CFR 571.218), also known as "novelty helmets," do not provide effective protection (Rice et al., 2017). While there have been claims that wearing a helmet increases the risk of neck injury, this has been refuted by about a dozen studies (e.g., Crompton et al., 2011; Orsay et al., 1994). Similarly, claims that motorcycle helmets reduce riders' visibility and hearing have also been debunked (McKnight & McKnight, 1994).

Of course, helmets only protect riders if riders wear them, and the most effective way of increasing helmet use is with a straightforward traffic rule requiring all motorcyclists to wear a helmet while riding. State laws that impose such a rule are known as universal or all-rider helmet laws. The first all-rider helmet law in the United States was enacted in 1966 (Kirley et al., 2023) and by 1975, 47 states

and the District of Columbia had enacted all-rider helmet laws (Figure 1). The spread of such laws was a direct result of federal policy: The 1966 National Highway Safety Act made state eligibility for certain highway safety and construction funding contingent on such laws. This eligibility requirement was removed in 1976 (Federal-Aid Highway Act of 1976). Subsequently, many states repealed their all-rider helmet laws or, more typically, weakened them by making them apply only to riders under a certain age (usually 21). By 1978, only 22 states and DC required all riders to be helmeted; as of 2024, 17 states and DC have this requirement (Figure 1). In 2022, the latest year of available data, 93% of motorcyclists observed in states with all-rider helmet laws were helmeted, in contrast to 64% of motorcyclists in states without such laws (National Highway Traffic Safety Administration, 2023).

Because they increase helmet use, all-rider helmet laws are associated with lower motorcyclist fatality rates, head injury rates, and medical costs. For instance, in studies controlling for state-to-state differences such as average temperature, precipitation, residential density, per capita income, speed limits, and alcohol laws, all-rider helmet laws were associated with lower motorcyclist fatality rates per population, number of registered motorcycles, and vehicle miles traveled than states that allowed unhelmeted motorcycling (Branas & Knudson, 2001; French et al., 2009; Houston & Richardson, 2008, 2007; Sosin & Sacks, 1992). Laws that apply only to younger riders have not been effective at improving safety for those that are covered (Weiss et al., 2010), presumably because they are difficult to enforce.

The changes to state helmet laws enabled researchers to conduct many before–after studies of safety-related outcomes and medical costs. For example, when Florida weakened its all-rider helmet law in 2000, the fatality rate per 1,000 crash involvements increased 35% (Kyrychenko & McCartt, 2006). When Kentucky and Louisiana weakened their all-rider helmet laws in the late 1990s, rider fatalities increased 50% and 100%, respectively (Ulmer & Preusser, 2003). Both times that Texas weakened its all-rider helmet law—in 1977 and in 1997—motorcyclist fatalities increased, 35% and 31% (Preusser et al., 2000; Watson et al., 1980). Watson et al. studied repeals of all-rider helmet laws in 22 states and found rider fatalities rose more than expected in 20 of the 22 states. More recently, Michigan was an outlier,

with no change in fatalities after weakening its all-rider helmet law in 2012 (Carter et al., 2017). Similarly, rates of serious head injuries also increased after helmet law repeals (e.g., Carter et al., 2017; Mounce et al., 1992; Muelleman et al., 1992; Ulmer & Preusser, 2003). Unsurprisingly, given these results, studies show that helmeted riders and all-rider helmet laws are associated with lower medical costs, which in many cases are covered by the public (Bach & Wyman, 1986; Bray et al., 1985; Highway Loss Data Institute, 2017; Lawrence et al., 2002; Max et al., 1998; Muelleman et al., 1992; National Highway Traffic Safety Administration, 1996; Rivara et al., 1988; Ulmer & Northrup, 2005). On the other hand, when California required all riders to be helmeted in 1992, motorcyclist fatalities decreased by 37% (Kraus et al., 1994). Overall, with rare exception, enacting all-rider helmet laws reduces fatality and head injury rates as well as medical costs, and weakening all-rider helmet laws increases these outcomes.

The purpose of this study was to estimate how many fewer motorcyclists would have died in crashes in the United States if every state had an all-rider helmet law from 1976 through 2022. This is a direct measure of the human cost of the policy of allowing unhelmeted motorcycling in some jurisdictions.

2. Method

The overall approach was to estimate helmet use for two groups within each year: motorcyclist fatalities in states (plus DC) that had all-rider helmet laws and in states that allowed unhelmeted motorcycling. This allows for variation over time in the population-level rate of helmet use during the study period. Then the number of lives that would have been saved each year had all-rider helmet laws been in place everywhere (i.e., if the helmet use rate in states that allow unhelmeted motorcycling was equal to the rate in jurisdictions with all-rider helmet laws) was estimated based on helmet effectiveness. Results were summed across years.

Population-level helmet use rate, which is conceptualized as the proportion of vehicle miles traveled (VMT) involving the rider being helmeted, can be estimated from effectiveness and the numbers of helmeted and unhelmeted motorcyclist fatalities as follows. This derivation assumes that helmeted and unhelmeted riders' crash fatality rates per VMT differ only by helmet effectiveness. The derivation follows similar lines of thinking as found in Deutermann (2005) and Glassbrenner and Starnes (2009). Effectiveness was taken as 37% (Deutermann, 2004) for the current study.

Population-level helmet use rate

$$= \frac{\text{VMT}_{\text{helmeted}}}{\text{VMT}_{\text{helmeted}} + \text{VMT}_{\text{unhelmeted}}}$$

$$= \frac{\frac{\text{Fatalites}_{\text{helmeted}}}{\text{Rate}_{\text{helmeted}}}}{\frac{\text{Fatalities}_{\text{helmeted}}}{\text{Rate}_{\text{helmeted}}} + \frac{\text{Fatalities}_{\text{unhelmeted}}}{\text{Rate}_{\text{unhelmeted}}}}, \text{ where rate = fatalities/VMT}$$

$$= \frac{\frac{\text{Fatalites}_{\text{helmeted}}}{\text{Rate}_{\text{helmeted}}}}{\frac{\text{Fatalities}_{\text{helmeted}}}{\text{Rate}_{\text{helmeted}}} + (1 - \text{Effectiveness})\frac{\text{Fatalities}_{\text{unhelmeted}}}{\text{Rate}_{\text{helmeted}}}}, \text{ since we assume } \text{Rate}_{\text{helmeted}} = (1 - \text{Effectiveness}) \times \text{Rate}_{\text{unhelmeted}}$$

$$= \frac{1}{1 + \frac{\text{Fatalities}_{\text{unhelmeted}}}{\text{Fatalities}_{\text{helmeted}}}(1 - \text{Effectiveness})}$$

The other fundamental calculation is estimating how many fatalities would have occurred if the population-level helmet use rate was higher. NHTSA periodically estimated lives saved if helmet use was 100% (e.g., Deutermann, 2005; National Highway Traffic Safety Administration, 2018) as did another study

(Dee, 2009), but helmet use clearly is less than 100% in all-rider helmet law states, so a slightly different estimate formula is needed for the current study. The general formula below or similar ones are found in other studies as well (e.g., Blincoe, 1994; Dee, 2009; Evans, 1987).

Fatalities prevented if population-level helmet use rate was 100 × $\text{Helmetuse}_{\text{new}}$%, instead of 100 × $\text{Helmetuse}_{\text{actual}}$%

$$= \frac{\text{Fatalities}_{\text{actual}} \times \text{Effectiveness} \times (\text{Helmetuse}_{\text{new}} - \text{Helmetuse}_{\text{actual}})}{1 - \text{Effectivenss} \times \text{Helmetuse}_{\text{actual}}}$$

To derive this formula, first consider the relationship between $\text{Fatalities}_{\text{actual}}$ (or F_{actual} for brevity), the number of fatalities that were actually observed and that arose from a population-level helmet use rate of 100 × $\text{Helmetuse}_{\text{actual}}$ % (estimated with the formula derived above), and F_{zero}, the number of fatalities we would have if there were no helmet use (i.e., if the use rate was zero). This is given by the formula below, which shows the number of unhelmeted fatalities and helmeted fatalities weighted by actual helmet use rate. Specifically, the number of unhelmeted fatalities is simply the nonuse rate times F_{zero}, and the number of helmeted fatalities is the product of the use rate, F_{zero}, and 1-effectiveness since helmets prevent some crash involvements from becoming fatalities per the definition of effectiveness.

$$F_{\text{actual}} = (1 - \text{Helmetuse}_{\text{actual}}) \times F_{\text{zero}} + \text{Helmetuse}_{\text{actual}} \times (1 - \text{Effectiveness}) \times F_{\text{zero}}$$

$$\text{Or } F_{\text{zero}} = \frac{F_{\text{actual}}}{1 - \text{Effectiveness} \times \text{Helmetuse}_{\text{actual}}}$$ note: F_{actual}, $\text{Helmetuse}_{\text{actual}}$, Effectiveness are all known.

Similarly, for a given new helmet use rate, 100 × $\text{Helmetuse}_{\text{new}}$%, we have

$$F_{\text{new}} = (1 - \text{Helmetuse}_{\text{new}}) \times F_{\text{zero}} + \text{Helmetuse}_{\text{new}} \times (1 - \text{Effectiveness}) \times F_{\text{zero}}$$

And, substituting the formula for F_{zero}, we have

$$F_{\text{new}} = \frac{1 - \text{Effectiveness} \times \text{Helmetuse}_{\text{new}}}{1 - \text{Effectiveness} \times \text{Helmetuse}_{\text{actual}}} F_{\text{actual}}$$

Then estimated lives saved (since new helmet use rate is higher than actual rate), is given by

$$\text{lives saved} = F_{\text{actual}} - F_{\text{new}}$$

$$= F_{\text{actual}}\left(1 - \frac{1 - \text{Effectiveness} \times \text{Helmetuse}_{\text{new}}}{1 - \text{Effectiveness} \times \text{Helmetuse}_{\text{actual}}}\right)$$

$$= \frac{F_{\text{actual}} \times \text{Effectiveness} \times (\text{Helmetuse}_{\text{new}} - \text{Helmetuse}_{\text{actual}})}{1 - \text{Effectiveness} \times \text{Helmetuse}_{\text{actual}}}, \text{ which is the formula from above.}$$

Another analysis repeated the calculation within each state to illustrate the cumulative effect of allowing unhelmeted motorcycling. This analysis used the same estimate of all-rider law helmet use rate for each year (i.e., estimated across all jurisdictions with all-rider helmet laws as a group), but estimated each individual state's helmet use rate for states where unhelmeted motorcycling was allowed. The latter involved smaller sample sizes and thus greater variability of the estimates. Results were summed across all study years, and the latest year involving a motorcyclist fatality in the absence of an all-rider helmet law was also noted. Effective dates of helmet law changes were obtained from the IIHS Legal Department from 1975 or earlier through July 1, 2024. Data on motorcyclist fatalities were extracted from the Fatality Analysis Reporting System, a census of fatal crashes maintained by NHTSA, for the period beginning 1976, the year federal incentives for states were removed, through 2022, the latest year of available data at the time of this study. Motorcycles were defined by FARS body type codes 80–89, which cover two- and three-wheel motorcycles, mopeds, dirt bikes, etc. Helmet use, using the FARS restraint use variable for most years and the helmet use variable for later years, included both helmets coded as meeting federal standards as well as novelty helmets because it is unclear that these can be accurately separated in FARS (and were not distinguished in FARS coding until later years). Unknown helmet use was counted as nonuse. Full details on FARS coding are available in the FARS Analytical User's Manual (National Highway Traffic Safety Administration, 2024). Fatalities were disaggregated by all-rider helmet law status by date instead of by state-year, accounting for midyear (or other date) helmet law changes.

3. Results

The primary results of the study are outlined in Table 1. Across all study years, if helmet use in states that allowed unhelmeted motorcycling had been equal to helmet use under all-rider helmet laws, 22,058 fewer motorcyclists would have died in crashes. This amounts to 11% of all motorcyclist fatalities across these years, and 10% for 2022. While estimated population-level helmet use has increased over the years, both for all-rider helmet law states and in states that allow unhelmeted riding, all-rider helmet laws were associated with helmet use rates that were generally 2–3 times as high as in states without such laws. Estimated lives lost due to allowing unhelmeted riding ranged from 182 in 1976, when most states had all-rider laws but helmet use was lower, to 673 in 2021, when helmet use was higher but only 18 states and DC had all-rider helmet laws. Table 2 shows the breakdown of the 22,058 figure by state. Since this involves estimating helmet use within each state, resulting in more variability, these numbers sum to only 22,033. For 12 states and DC, the figure was zero because they had all-rider helmet laws throughout the entire study period. For California, if the state had an all-rider helmet law throughout the 1976–2022 study period, there would have been 2,536 fewer rider fatalities. This was the largest number of any state, likely reflecting high motorcycle exposure during the time. However, California has had an all-rider helmet law since 1992, so this number is not increasing. Thirty-two states lacked all-rider helmet laws and experienced excess rider fatalities in 2022, the latest study year; 33 states lacked all-rider helmet laws at the time of writing this paper, so these numbers will continue to increase.

4. Discussion

The lack of all-rider helmet laws in many states has come at a large cost—the deaths of over 22,000 people in the United States. Helmets provide a necessary layer of protection for motorcyclists when they are involved in crashes, but helmets do not prevent all fatalities and they do not prevent crashes. Helmets and laws requiring all riders to wear them must be coupled with other effective or promising countermeasures, such as motorcycle antilock braking systems (Basch et al., 2015; Rizzi et al., 2015; Teoh, 2022), crash avoidance technology on other vehicles that detects motorcyclists (Insurance Institute for Highway Safety, 2024b; Kidd et al., 2023; Teoh, 2023a), increasing use of protected left turn signals (Hauer, 2003; Teoh, 2023a) as well as measures to more broadly address high speeds and speeding (Farmer, 2017; Hu & Cicchino, 2023, 2024; Hu & McCartt, 2016; Reagan & Cicchino, 2024) and alcohol use (Insurance Institute for Highway Safety, 2024a). While there is a great deal of opportunity to implement or invent countermeasures, a straightforward rule of the road that can prevent 10% of motorcyclist fatalities is a necessary and foundational component of a Safe System for motorcycling. Unlike many other countermeasures, all-rider helmet laws involve relatively little monetary cost to implement, and the benefits begin immediately.

The intent of the current study was to come up with a simple and straightforward estimate of the human cost of not having all-rider helmet laws. As such, the study has several limitations that should be noted. The first is that the analysis assumed that helmeted and unhelmeted riders' fatality rates per VMT differed only by their helmet use. It is possible that helmet nonuse is associated with other behaviors that increase crash or fatality risk. If helmet nonuse is associated with other behaviors that increase fatality risk per VMT, this study's methods would overestimate the population-level helmet use rate and underestimate the human cost of interest. The estimated helmet use rates in Table 1 are reasonably similar to those in NHTSA's observational surveys (e.g., National Highway Traffic Safety Administration, 2023), and the differences may be due to the sampling method such as observing motorcyclists' helmet use only

during the daytime, even though about a quarter of motorcyclist fatalities occur at night (Insurance Institute for Highway Safety, 2024a).

Another limitation is that the analyses did not distinguish between helmets that meet federal standards and novelty helmets, as this was not coded for all years of FARS, and it may not be coded by all states' police crash reports in the first place. The helmet effectiveness study used in this analysis (Deutermann, 2004) did not exclude novelty helmets as this was not coded in FARS at that time, so it is possible that novelty helmets weakened the effectiveness estimate. The study did suggest that helmet effectiveness had improved since the early 1980s due to improvements in helmet designs, which were not accounted for in the current study. Substituting the earlier years' effectiveness estimate, 29% (Deutermann, 2004), reduced the overall human cost figure to about 20,000. On the other hand, other effectiveness estimates are higher than the 37% figure used. The proportion of observed helmets used that are novelty helmets is similar in all-rider helmet law states and states that do not have these laws (National Highway Traffic Safety Administration, 2023), so it is unlikely that novelty helmets biased the current study's estimated relative helmet use by helmet law type.

Lastly, the analysis begins in 1976, when federal efforts to incentivize states to have all-rider helmet laws ended, but all-rider helmet laws could have saved lives since their advent in 1966. FARS data collection began in 1975 and fatal crash data before then were less reliable. So, while the current study might underestimate the total number of lives that could have been saved in this manner, 1976 was chosen as a reasonable starting point.

More than 6,000 motorcyclists die in crashes each year in crashes on our nation's roads (Insurance Institute for Highway Safety, 2024a). The current study shows that having an all-rider helmet law in every state could reduce this figure by 10% and that over 22,000 people have already lost their lives because of the underutilization of this straightforward traffic rule.

5. Practical Applications

States should reduce the number of rider fatalities in crashes by enacting laws requiring helmet use for all motorcyclists traveling on public roads. The various concerns making this straightforward rule of the road unpopular among some riders must be weighed against the human cost of not having such laws. Coupling all-rider helmet laws with other effective countermeasures increases safety for motorcyclists on our nation's roads.

6. Acknowledgements

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7. References

Bach, B. R., & Wyman, E. T. (1986). Financial charges of hospitalized motorcyclists at the Massachusetts General Hospital. *Journal of Trauma and Acute Care Surgery*, *26*, 343-347.

Basch, N., Moore, M., & Hellinga, L. A. (2015). *Evaluation of motorcycle antilock braking systems* International Technical Conference on the Enhanced Safety of Vehicles, Gothenburg, Sweden.

Blincoe, L. J. (1994). *Estimating the benefits from increased safety belt use* (DOT HS 808-133). National Highway Traffic Safety Administration.

Branas, C. C., & Knudson, M. M. (2001). Helmet laws and motorcycle rider death rates. *Accident Analysis & Prevention*, *33*, 641-648.

Bray, T., Szabo, R., Timmerman, L., Yen, L., & Madison, M. (1985). Cost of orthopedic injuries sustained in motorcycle accidents. *Journal of the American Medical Association*, *254*(17), 2452-2453. https://www.ncbi.nlm.nih.gov/pubmed/4046167

Carter, P. M., Buckley, L., Flannagan, C. A., Cicchino, J. B., Hemmila, M., Bowman, P. J., Almani, F., & Bingham, C. R. (2017). The impact of Michigan's partial repeal of the universal motorcycle helmet law on helmet use, fatalities, and head injuries. *American Journal of Public Health*, *107*(1), 166-172. https://doi.org/10.2105/AJPH.2016.303525

Crompton, J. G., Bone, C., Oyetunji, T., Pollack, K. M., Bolorunduro, O., Villegas, C., Stevens, K., Cornwell, E. E., 3rd, Efron, D. T., Haut, E. R., & Haider, A. H. (2011). Motorcycle helmets associated with lower risk of cervical spine injury: Debunking the myth. *Journal of the American College of Surgeons*, *212*(3), 295-300. https://doi.org/10.1016/j.jamcollsurg.2010.09.032

Dee, T. S. (2009). Motorcycle helmets and traffic safety. *Journal of Health Economics*, *28*(2), 398-412. https://doi.org/10.1016/j.jhealeco.2008.12.002

Deutermann, W. (2004). *Motorcycle helmet effectiveness revisited* (DOT HS 809 715). National Highway Traffic Safety Administration.

Deutermann, W. (2005). *Calculating lives saved by motorcycle helmets* (DOT HS 809 861). National Highway Traffic Safety Administration.

Evans, L. (1987). Estimating fatality reductions from increased safety belt use. *Risk Analysis*, *7*(1), 49-57. https://doi.org/10.1111/j.1539-6924.1987.tb00968.x

Farmer, C. M. (2017). Relationship of traffic fatality rates to maximum state speed limits. *Traffic Injury Prevention*, *18*(4), 375-380. https://doi.org/10.1080/15389588.2016.1213821

Federal-Aid Highway Act of 1976, Pub. L. No. 94-280, § 208(a), (1976). 90 Stat. 425.

French, M. T., Gumus, G., & Homer, J. F. (2009). Public policies and motorcycle safety. *Journal of Health Economics*, *28*(4), 831-838. https://doi.org/10.1016/j.jhealeco.2009.05.002

Glassbrenner, D., & Starnes, M. (2009). *Lives saved calculations for seat belts and frontal air bags* (DOT HS 811 206). National Highway Traffic Safety Administration.

Hauer, E. (2003). *Left-turn protection. Safety. Literature reveiw up to 2003*. University of Toronto.

Highway Loss Data Institute. (2017). The effects of Michigan's weakened motorcycle helmet use law on insurance losses - five years later. *Bulletin*, *34*(36), 1-11.

Houston, D. J., & Richardson, L. E. (2008). Motorcyclist fatality rates and mandatory helmet-use laws. *Accident Analysis & Prevention*, *40*(1), 200-208. https://doi.org/10.1016/j.aap.2007.05.005

Houston, D. J., & Richardson, L. E., Jr. (2007). Motorcycle safety and the repeal of universal helmet laws. *American Journal of Public Health*, *97*(11), 2063-2069. https://doi.org/10.2105/AJPH.2006.094615

Hu, W., & Cicchino, J. B. (2023). Effects of a rural speed management pilot program in Bishopville, Maryland on public opinion and vehicle speeds. *Journal of Safety Research*, *85*, 278-286.

Hu, W., & Cicchino, J. B. (2024). Effects of lowering speed limits on crash severity in Seattle. *Journal of Safety Research*, *88*, 174-178.

Hu, W., & McCartt, A. T. (2016). Effects of automated speed enforcement in Montgomery County, Maryland, on vehicle speeds, public opinion, and crashes. *Traffic Injury Prevention*, *17*(sup1), 53-58.

Insurance Institute for Highway Safety. (2024a). *Fatality facts 2022: Motorcycles and ATVs*. Retrieved 06/24/2024. https://www.iihs.org/topics/fatality-statistics/detail/motorcycles-and-atvs

Insurance Institute for Highway Safety. (2024b). *Few small SUVs excel in new IIHS front crash prevention test*. Retrieved 07/05/2024. https://www.iihs.org/news/detail/few-small-suvs-excel-in-new-iihs-front-crash-prevention-test

Kidd, D. G., Teoh, E. R., & Jermakian, J. S. (2023). How can front crash prevention systems address more police-reported crashes in the United States? *Accident Analysis & Prevention*, *191*, 107199. https://doi.org/10.1016/j.aap.2023.107199

Kirley, B. B., Robison, K., Goodwin, A. H., Harmon, K., O'Brien, N., West, A., Harrell, S., Thomas, L., & Brookshire, K. (2023). *Countermeasures that work: A highway safety countermeasure guide for state highway safety offices* (DOT HS 813 490). National Highway Traffic Safety Administration.

Kraus, J. F., Peek, C., McArthur, D. L., & Williams, A. (1994). The effect of the 1992 California motorcycle helmet use law on motorcycle crash fatalities and injuries. *Journal of the American Medical Association*, *272*(19), 1506-1511. https://www.ncbi.nlm.nih.gov/pubmed/7966842

Kyrychenko, S. Y., & McCartt, A. T. (2006). Florida's weakened motorcycle helmet law: Effects on death rates in motorcycle crashes. *Traffic Injury Prevention*, 7(1), 55-60.

Lawrence, B. A., Max, W., & Miller, T. R. (2002). *Cost of injuries resulting from motorcycle crashes: A literature review* (DOT HS 809 242). Pacific Institute for Research and Evaluation and National Highway Traffic Safety Administration.

Liu, B., Ivers, R., Norton, R., Blows, S., & Lo, S. K. (2004). Helmets for preventing injury in motorcycle riders. *Cochrane Database of Systematic Reviews*(2), CD004333. https://doi.org/10.1002/14651858.CD004333.pub2

Max, W., Stark, B., & Root, S. (1998). Putting a lid on injury costs: The economic impact of the California motorcycle helmet law. *Journal of Trauma and Acute Care Surgery*, *45*(3), 550-556. https://doi.org/10.1097/00005373-199809000-00023

McKnight, A. J. & McKnight, A. S. (1994). *The effects of motorcycle helmets upon seeing and hearing* (DOT HS 808 399).

Mounce, N., Brackett, Q. R., W., H., Lund, A. K., & Wells, J. K. (1992). *The reinstated comprehensive motorcycle helmet law in Texas*. Insurance Institute for Highway Safety.

Muelleman, R. L., Mlinek, E. J., & Collicott, P. E. (1992). Motorcycle crash injuries and costs: Effect of a reenacted comprehensive helmet use law. *Annals of Emergency Medicine*, 21(3), 266-272. https://doi.org/10.1016/s0196-0644(05)80886-8

National Highway Traffic Safety Administration. (1996). *Report to Congress: Benefits of safety belts and motorcycle helmets* (DOT HS 808 347).

National Highway Traffic Safety Administration. (2008). *Motorcycle helmet use laws* (DOT HS 810 887W).

National Highway Traffic Safety Administration. (2018). *Lives and costs saved by motorcycle helmets, 2016* (DOT HS 812 518).

National Highway Traffic Safety Administration. (2023). *Motorcycle helmet use in 2022 - overall results* (DOT HS 813 505).

National Highway Traffic Safety Administration. (2024). *Fatality Analysis Reporting System analytical user's manual, 1975-2022* (DOT HS 813 556).

Norvell, D., & Cummings, P. (2002). Association of helmet use with death in motorcycle crashes: A matched-pair cohort study. *American Journal of Epidemiology 156*(5), 483-487.

Orsay, E. M., Muelleman, R. L., Peterson, T. D., Jurisic, D. H., Kosasih, J. B., & Levy, P. (1994). Motorcycle helmets and spinal injuries: Dispelling the myth. *Annals of Emergency Medicine*, *23*(4), 802-806. https://doi.org/10.1016/s0196-0644(94)70317-5

Preusser, D. F., Hedlund, J. H. , & Ulmer, R. G. (2000). *Evaluation of motorcycle helmet law repeal in Arkansas and Texas*. National Highway Traffic Safety Administration.

Reagan, I. J., & Cicchino, J. B. (2024). ISA in the USA? The likelihood of U.S. Drivers accepting and using intelligent speed assistance. Insurance Institute for Highway Safety.

Rice, T. M., Troszak, L., Erhardt, T., Trent, R. B., & Zhu, M. (2017). Novelty helmet use and motorcycle rider fatality. *Accident Analysis & Prevention*, *103*, 123-128. https://doi.org/10.1016/j.aap.2017.04.002

Rivara, F. P., Dicker, B. G., Bergman, A. B., Dacey, R., & Herman, C. (1988). The public cost of motorcycle trauma. *Journal of the American Medical Association*, *260*(2), 221-223. https://www.ncbi.nlm.nih.gov/pubmed/3290518

Rizzi, M., Strandroth, J., Kullgren, A., Tingvall, C., & Fildes, B. (2015). Effectiveness of motorcycle antilock braking systems (ABS) in reducing crashes, the first cross-national study. *Traffic Injury Prevention*, *16*(2), 177-183. https://doi.org/10.1080/15389588.2014.927575

Sosin, D. M., & Sacks, J. J. (1992). Motorcycle helmet-use laws and head injury prevention. *Journal of the American Medical Association*, *267*(12), 1649-1651. https://doi.org/10.1001/jama.267.12.1649

Teoh, E. R. (2022). Motorcycle antilock braking systems and fatal crash rates: Updated results. *Traffic Injury Prevention*, *23*(4), 203-207. https://doi.org/10.1080/15389588.2022.2047957

Teoh, E. R. (2023a). Left-turn crashes and motorcycle safety. *Traffic Injury Prevention*, *24*(6), 511-512. https://doi.org/10.1080/15389588.2023.2222327

Teoh, E. R. (2023b). *Motorcycles registered in the United States, 2002-2023*. Insurance Institute for Highway Safety.

Ulmer, R. G., & Northrup, V. S. (2005). *Evaluation of the repeal of the all-rider motorcycle helmet law in Florida* (DOT HS 809 849). National Highway Traffic Safety Administration.

Ulmer, R. G., & Preusser, D. F. (2003). *Evaluation of the repeal of motorcycle helmet laws in Kentucky and Louisiana* (DOT HS 809 530). National Highway Traffic Safety Administration.

Watson, G. S., Zador, P. L., & Wilks, A. (1980). The repeal of helmet use laws and increased motorcyclist mortality in the United States, 1975-1978. *American Journal of Public Health*, *70*(6), 579-585.

Weiss, H., Agimi, Y., & Steiner, C. (2010). Youth motorcycle-related brain injury by state helmet law type: United States, 2005-2007. *Pediatrics*, *126*(6), 1149-1155. https://doi.org/10.1542/peds.2010-0902

Yu, W. Y., Chen, C. Y., Chiu, W. T., & Lin, M. R. (2011). Effectiveness of different types of motorcycle helmets and effects of their improper use on head injuries. *International Journal of Epidemiology*, *40*(3), 794-803. https://doi.org/10.1093/ije/dyr040

8. Figures and Tables

Figure 1

Number of laws in effect as of July 1 in 50 states and DC requiring helmet use by all motorcyclists, 1975–2024

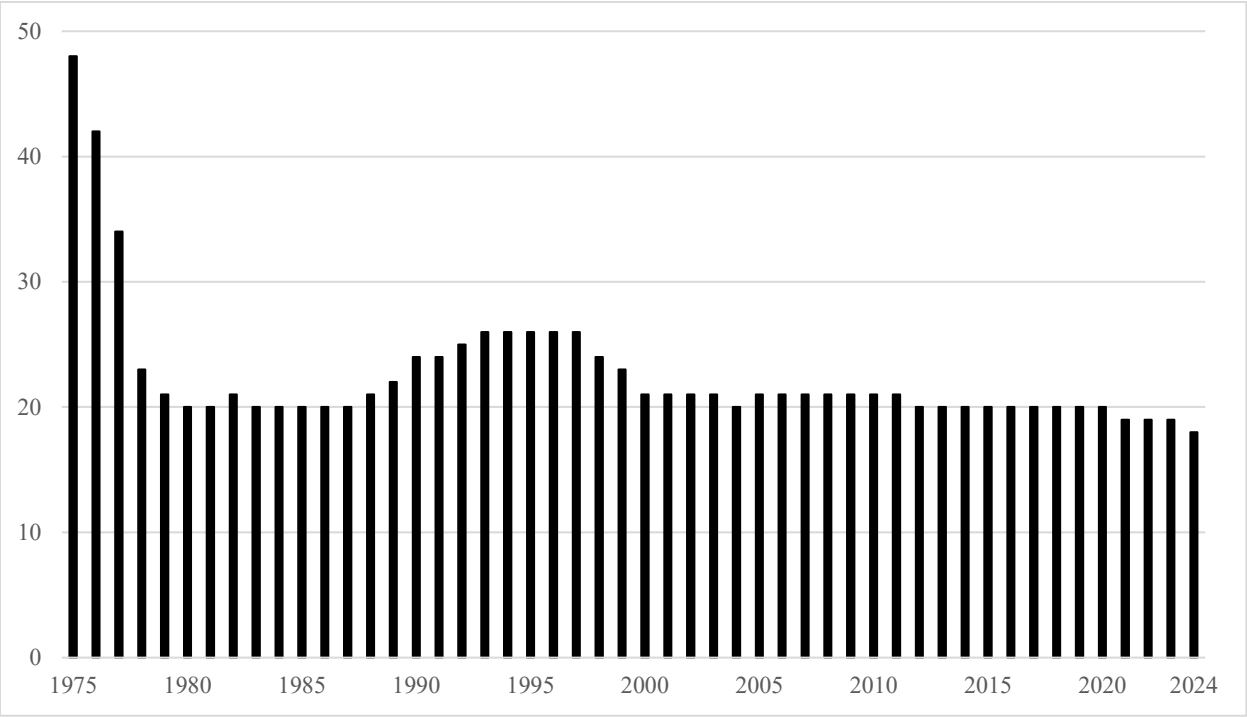

Table 1

Estimated fatalities that would have been prevented if helmet use in states that allowed unhelmeted motorcycling had been as high as in states with all-rider helmet use laws, 1976–2022

	Fatalities in all-rider helmet law states		Fatalities in states that allowed unhelmeted riding		Estimated population-level helmet use rate		
	Helmeted	Unhelmeted	Helmeted	Unhelmeted	In states with all-rider helmet laws	In states where unhelmeted riding allowed	Estimated fatalities attributable to allowing unhelmeted motorcycling
1976	1,229	1,093	115	869	64.1%	17.4%	182
1977	1,408	976	255	1,460	69.6%	21.7%	330
1978	1,126	665	462	2,321	72.9%	24.0%	552
1979	1,030	656	573	2,633	71.4%	25.7%	599
1980	1,100	674	561	2,803	72.1%	24.1%	657
1981	1,051	613	572	2,660	73.1%	25.4%	629
1982	1,085	522	518	2,324	76.7%	26.1%	589
1983	953	622	502	2,183	70.9%	26.7%	486
1984	1,060	645	527	2,370	72.3%	26.1%	548
1985	1,035	647	526	2,354	71.7%	26.2%	538
1986	1,064	554	562	2,386	75.3%	27.2%	583
1987	923	515	524	2,072	74.0%	28.6%	487
1988	895	440	502	1,824	76.4%	30.4%	446
1989	851	366	372	1,546	78.7%	27.6%	403
1990	1,051	425	321	1,446	79.7%	26.1%	388
1991	904	348	301	1,252	80.5%	27.6%	338
1992	1,142	388	135	730	82.4%	22.7%	209
1993	1,190	392	126	737	82.8%	21.3%	213
1994	1,114	342	147	714	83.8%	24.6%	207
1995	1,078	330	140	678	83.8%	24.7%	197
1996	1,050	297	141	673	84.9%	25.0%	199
1997	1,037	280	142	657	85.5%	25.5%	196
1998	989	269	214	822	85.4%	29.2%	241
1999	1,050	281	297	855	85.6%	35.5%	246
2000	1,122	279	406	1,088	86.5%	37.2%	316
2001	1,194	268	452	1,281	87.6%	35.9%	382
2002	1,238	242	461	1,326	89.0%	35.6%	407
2003	1,359	250	601	1,500	89.6%	38.9%	461
2004	1,447	240	789	1,550	90.5%	44.7%	475
2005	1,682	284	908	1,701	90.4%	45.9%	518
2006	1,868	266	912	1,764	91.8%	45.1%	555
2007	1,970	276	1,040	1,888	91.9%	46.6%	592
2008	1,996	268	1,102	1,941	92.2%	47.4%	612
2009	1,636	235	874	1,722	91.7%	44.6%	542
2010	1,732	202	852	1,731	93.2%	43.9%	562
2011	1,792	184	910	1,744	93.9%	45.3%	574
2012	1,756	206	1,080	1,944	93.1%	46.9%	626
2013	1,632	175	1,070	1,814	93.7%	48.4%	589
2014	1,717	182	1,042	1,653	93.7%	50.0%	535
2015	1,751	186	1,223	1,866	93.7%	51.0%	602
2016	1,923	223	1,197	1,994	93.2%	48.8%	640
2017	1,872	236	1,283	1,838	92.6%	52.6%	575
2018	1,846	230	1,197	1,765	92.7%	51.8%	554
2019	1,840	247	1,199	1,758	92.2%	52.0%	545
2020	1,958	268	1,385	2,008	92.1%	52.3%	619
2021	2,057	301	1,564	2,215	91.6%	52.8%	673
2022	2,109	299	1,689	2,125	91.8%	55.8%	640
Total	64,912	17,887	31,771	78,585			22,058

Table 2

Estimated motorcyclist fatalities attributable to allowing unhelmeted motorcycling by state, 1976–2022

	Estimated fatalities attributable to allowing unhelmeted motorcycling	Most recent year with a fatality when unhelmeted motorcycling was allowed
AK	38	2022
AL	0	Before 1976
AR	322	2022
AZ	965	2022
CA	2,536	1991
CO	672	2022
CT	513	2022
DC	0	Before 1976
DE	73	2022
FL	1,786	2022
GA	0	Before 1976
HI	211	2022
IA	571	2022
ID	187	2022
IL	1,738	2022
IN	1,151	2022
KS	395	2022
KY	407	2022
LA	197	2004
MA	0	Before 1976
MD	93	1992
ME	197	2022
MI	267	2022
MN	584	2022
MO	57	2022
MS	0	Before 1976
MT	185	2022
NC	0	Before 1976
ND	96	2022
NE*	71	1988
NH	188	2022
NJ	0	Before 1976
NM	404	2022
NV	0	Before 1976
NY	0	Before 1976
OH	1,651	2022
OK	644	2022
OR	93	1988
PA	595	2022
RI	96	2022
SC	1,000	2022
SD	185	2022
TN	0	Before 1976
TX	2,490	2022
UT	267	2022
VA	0	Before 1976
VT	0	Before 1976
WA	153	1990
WI	841	2022
WV	0	Before 1976
WY	114	2022

* Nebraska weakened its all-rider helmet law, effective January 1, 2024.

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Request for an UNFAVORABLE Report

Testimony in Opposition to Senate Bill 397
Motorcycles - Protective Headgear Requirement – Exception
Before Judicial Proceedings Committee: February 4, 2025

The Legal Resource Center for Public Health Policy **opposes Senate Bill 397** because it would repeal the requirement that operators of and passengers on motorcycles wear a helmet, a public health and safety provision that protects against serious injury and death on Maryland roads. Although the bill title suggests this is merely an exception to the comprehensive motorcycle helmet requirement in existing law, the exception is quite broad, covering the vast majority of operators and passengers. Moreover, enforcement of a less-than-comprehensive helmet requirement is exceedingly difficult as law enforcement officers are not able to determine if an operator meets the broad exception created in this bill, likely resulting in little to no enforcement of the remaining requirement. Functionally, this bill would repeal the motorcycle helmet requirement in Maryland.

Any repeal of the comprehensive motorcycle helmet requirement is anti-thetical to public health and would make meeting our Vision Zero goals impossible. Passed in 2019, Maryland's Vision Zero law sets a goal of zero vehicle-related deaths or serious injuries on state roadways by the year 2030—a mere 5 years from now. The State's Vision Zero program team has worked consistently and steadily toward this goal, employing research, evidence-based best practices, and effective communications. The General Assembly bears the obligation to support Vision Zero by adopting laws that will reduce motor vehicle injuries and fatalities. And since 2019 you have done so by tightening laws related to driving under the influence, adopting provisions to protect highway workers in construction zones, and enhancing requirements for infant safety seats, among other traffic safety laws. Indeed, just last year the General Assembly passed Senate Bill 730/House Bill 102, improving motorcycle safety by requiring footrests for motorcycle passengers. And you created the Vision Zero Advisory Committee through Senate Bill 354/House Bill 344 to provide expertise and support to the Vision Zero program. This demonstrates the General Assembly's commitment to Vision Zero's goal of reducing traffic-related injuries and deaths. Passing Senate Bill 397 would be damaging to Vision Zero goals and to public health.

States that repeal motorcycle helmet requirements suffer a four-fold increase in motorcycle fatalities. In states without motorcycle helmet requirements, operators are ten times more likely to suffer a traumatic brain injury. Increasing roadway injury and death is bad public policy and would undercut the State's Vision Zero goals.

With this testimony, I have submitted the following documents that provide data in support of Maryland's existing comprehensive motorcycle helmet law and clearly demonstrate that Senate Bill 397's repeal would be detrimental to public health:

- *The Human Cost of Allowing Unhelmeted Motorcycling in the United States*, Insurance Institute of Highway Safety (October 2024)
- *Motorcycle Crashes 360° Approach*, National Study Center for Trauma & EMS at the University of Maryland, Baltimore (2025)
- *Motorcycle Literature Review,* National Study Center for Trauma & EMS at University of Maryland, Baltimore (2025)

Conclusion

Maryland takes seriously traffic safety; Vision Zero is proof of that. Repealing our motorcycle helmet requirement through Senate Bill 397 would make meeting our Vision Zero goals impossible and would result in more roadway death and serious injury. For these reasons, the Legal Resource Center for Public Health Policy requests an UNFAVORABLE report on Senate Bill 397.

This testimony is submitted on behalf of the Legal Resource Center for Public Health Policy at the University of Maryland Carey School of Law and not by the School of Law, the University of Maryland, Baltimore, or the University of Maryland System.

Motorcycle 360 Report_updated 2019_2023.pdf
Uploaded by: Kathleen Hoke
Position: UNF

Motorcycle Crashes 360° Approach

Prepared By:

National Study Center for Trauma & EMS (NSC)

University of Maryland, Baltimore

Prepared For:

Maryland Motor Vehicle Administration – Maryland Highway Safety Office

Maryland Department of Transportation

Background

- The previous report, published by the National Study Center (NSC) in 2016, supported discussions at the Motorcycle Safety Summit held in June 2018.
- This is the first preliminary report since 2016 and is intended to highlight new trends and insights based on the latest data. The findings aim to guide next steps and potential initiatives for improving motorcycle safety in Maryland.
- Based on data from the ACRS database for 2019 to 2023, this report presents a comprehensive overview of motorcycle crashes in Maryland, including detailed information on the operators and vehicles involved.
- The analysis includes tables, and summaries of key demographics, covering factors such as age, gender, impairment/speed, single- vs. multi-vehicle incidents, and helmet use among motorcyclists involved in crashes.

Data Sources

- **Maryland Crash Reports (ACRS)**: Data derived from all reported motorcycle crashes from 2019 to 2023.

Selection Criteria

- Includes all motorcycle crashes recorded between 2019 and 2023.

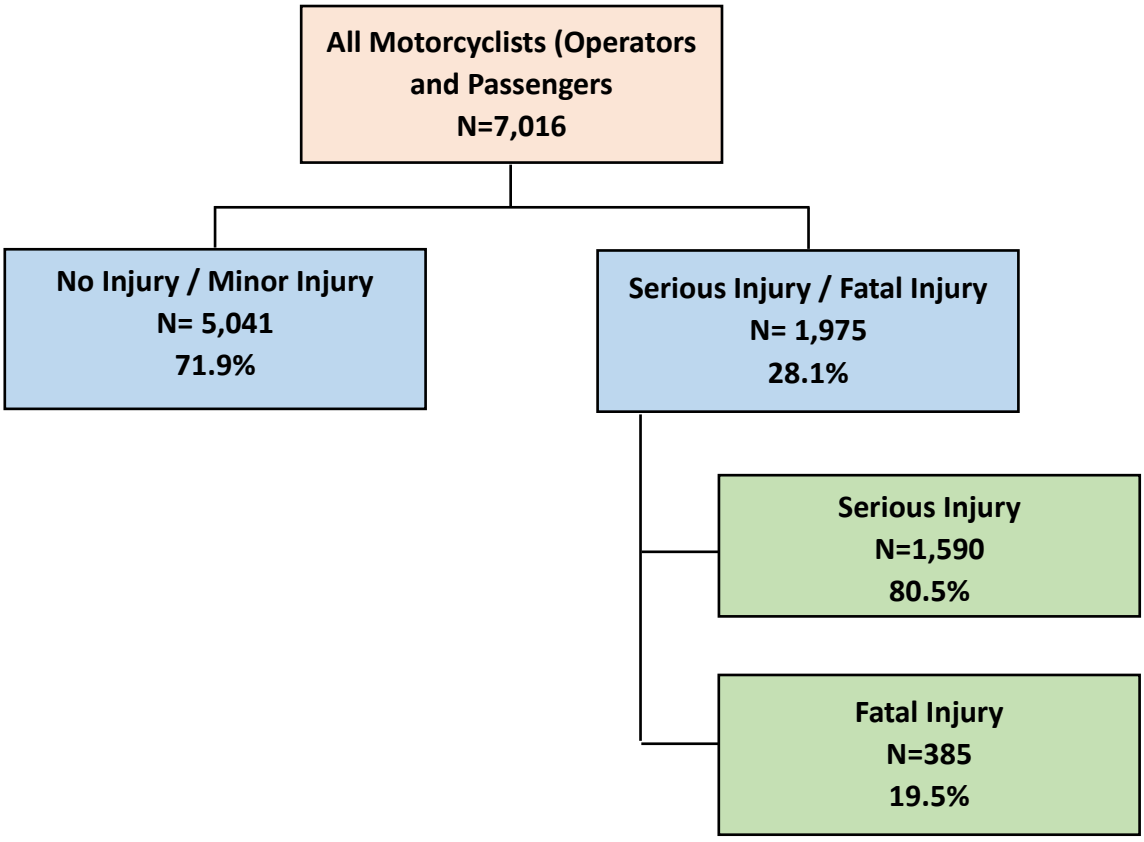
Definitions

- **Motorcycle Crashes**: Defined as crashes involving at least one vehicle with a body type coded as '01' (motorcycle).
- **Crash Severity**: Categorized by the highest KABCO injury score for any motorcycle driver or passenger involved:
  - *No Injury/ Minor Injury* – KABCO 1, 2, or 3
  - *Serious Injury/ Fatal Injury* – KABCO 4 or 5
- **Operator Age**: Ages recorded as 0 or greater than or equal to 90 are treated as "age unknown".

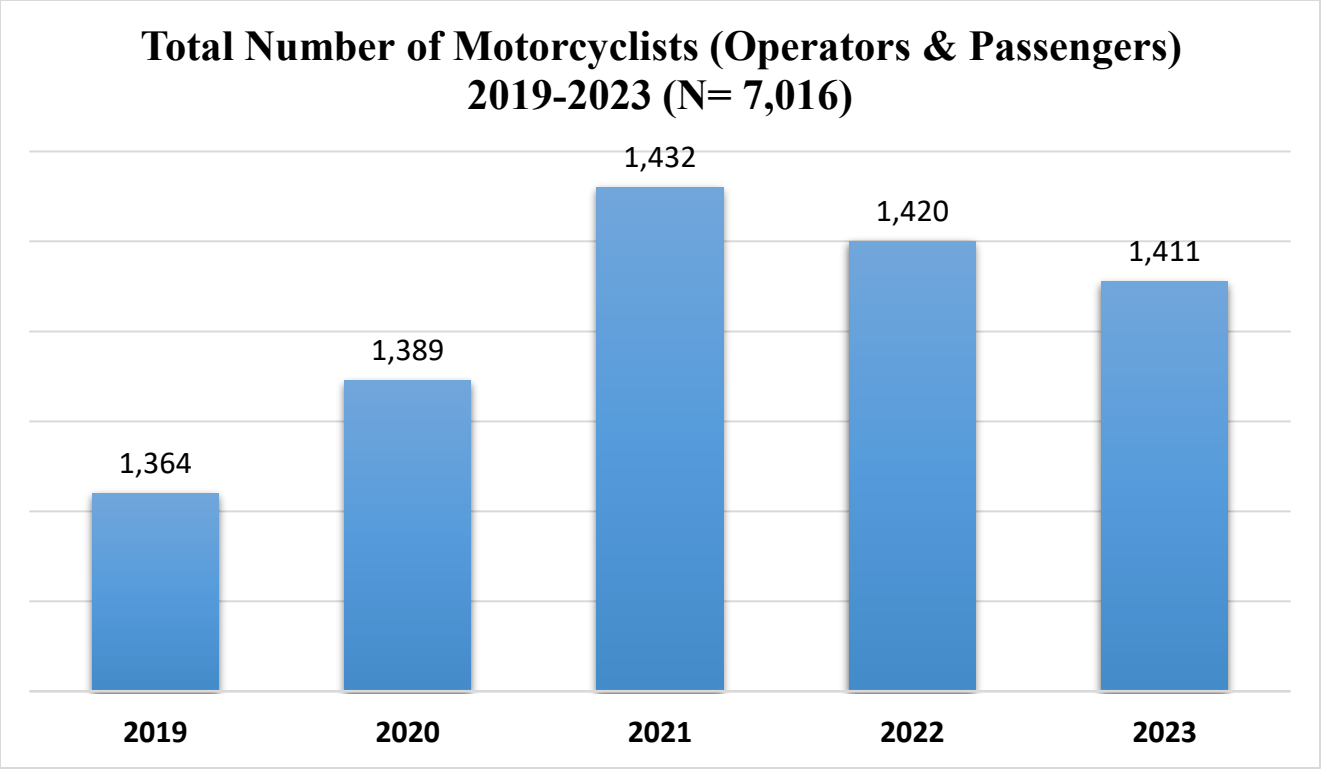
Summary

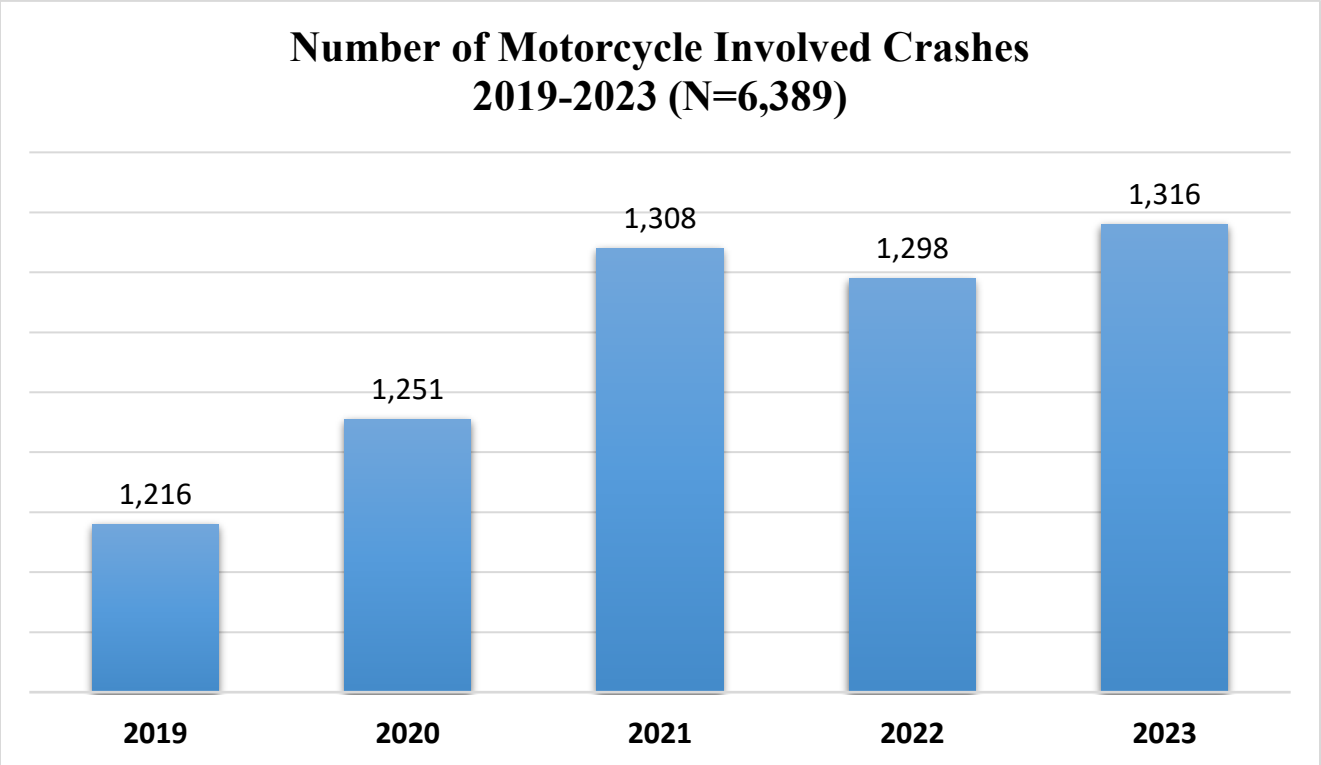
- **Results/Findings**

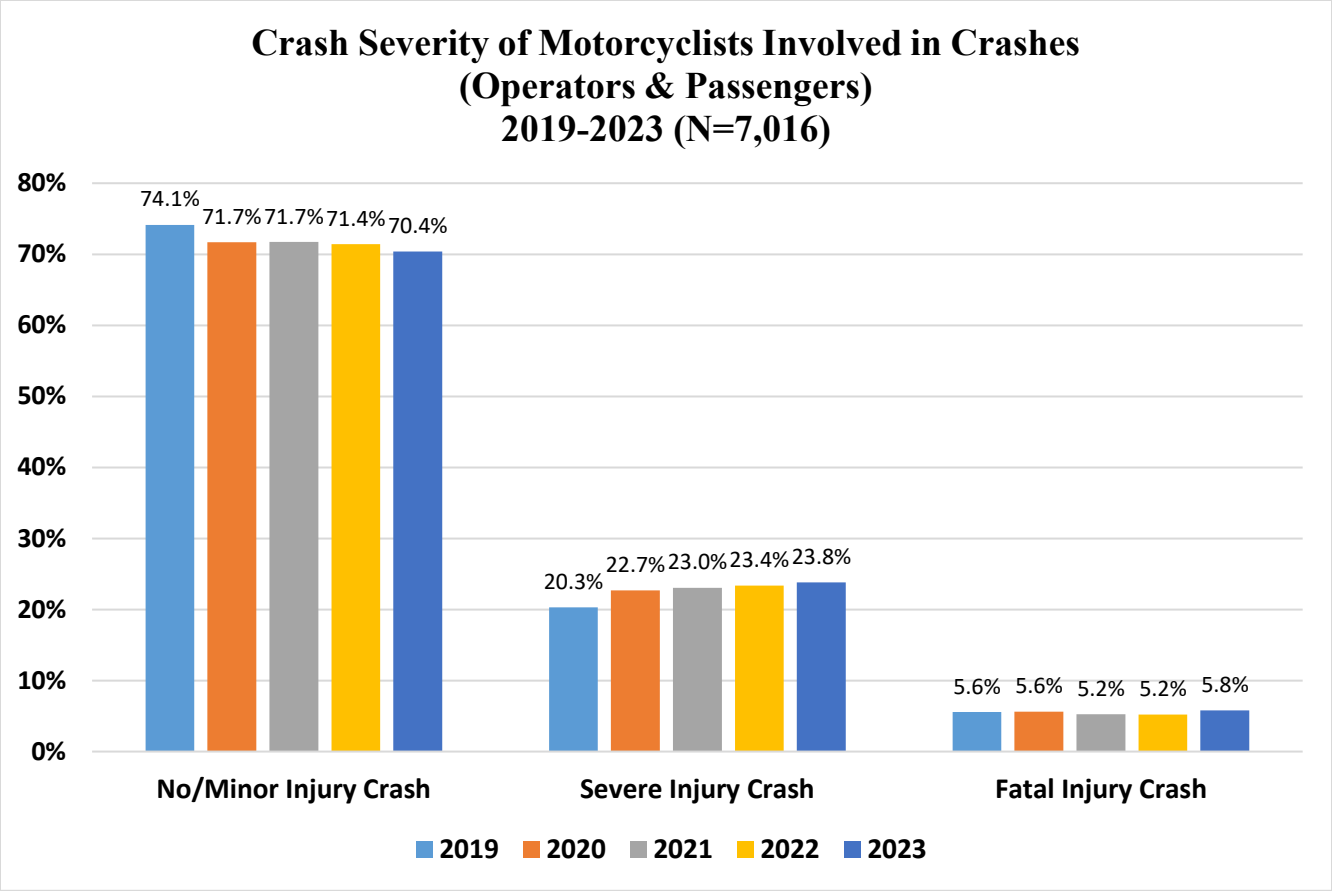
MD Motorcycle Involved Crashes 2019-2023



- Between 2019 and 2023, 7,016 Motorcyclists (Operators and Passengers) were involved in crashes on Maryland roads.
  - Of these, 1,975 (28.1%) resulted in serious injuries or fatalities.
  - Fatalities accounted for 19.5% of all serious injury and fatality cases, with about 395 motorcyclists killed on Maryland roads between 2019 and 2023.


Total Number of Motorcyclists (Operators & Passengers)
2019-2023 (N= 7,016)
1,364
1,389
1,432
1,420
1,411
2019
2020
2021
2022
2023


Number of Motorcycle Involved Crashes
2019-2023 (N=6,389)
1,216
1,251
1,308
1,298
1,316
2019
2020
2021
2022
2023



The trend over time based on the data from 2019 to 2023 shows a mixed pattern in the severity of injuries sustained by people involved in crashes:

- No/Minor Injury Crashes: The proportion of people involved in crashes who experienced no/minor injuries decreased from 74.1% in 2019 to 70.38% in 2023. This indicates a gradual reduction in the share of crashes resulting in minor or no injuries.
- Severe Injury Crashes: The percentage of people involved in crashes experiencing severe injuries increased from 20.31% in 2019 to 23.81% in 2023. This suggests a rising proportion of people experiencing severe injuries over time.
- Fatal Injury Crashes: The proportion of people involved in crashes resulting in fatalities increased slightly from 5.57% in 2019 to 5.81% in 2023, showing a modest but consistent rise in the share of crashes with fatal outcomes each year.

Overall, the data reveals a trend where the severity of crashes appears to be increasing over time. The proportion of severe injury crashes is rising, while no/minor injury crashes are decreasing slightly. Fatal injury crashes show a small but steady increase, indicating a growing impact of crashes over time.

Comprehensive Motorcycle Crash Summary (2019-2023)			
Categories		**N**	**%**
By Gender	Female	752	10.7%
	Male	5,998	85.5%
	Unknown	266	3.8%
	Total Number of Motorcyclists (Operators and Passengers)	**7,016**	**100%**
By Age group	15 and under	87	1.2%
	16	32	0.5%
	17	47	0.7%
	18	89	1.3%
	19	135	1.9%
	20	151	2.2%
	21-24	733	10.5%
	25-29	921	13.1%
	30-34	842	12.0%
	35-39	721	10.3%
	40-44	509	7.3%
	45-49	499	7.1%
	50-54	640	9.1%
	55-59	565	8.1%
	60-64	392	5.6%
	65-69	242	3.5%
	70-79	132	1.9%
	80 +	12	0.2%
	Unknown	267	3.8%
	Total Number of Motorcyclists (Operators and Passengers)	**7,016**	**100%**
By Impairment	Impaired	330	5.0%
	Not Impaired	6,234	95.0%
	Motorcyclist Operators	**6,564**	**100%**
By Speeding	Speeding	1,043	15.9%
	Not Speeding	5,521	84.1%
	Motorcyclist Operators	**6,564**	**100%**
By Hemet Use	Unhelmeted	2,073	29.5%
	Helmeted	4,943	70.5%
	Total Number of Motorcyclists (Operators and Passengers)	**7,016**	**100%**

Comprehensive Motorcycle Crash Summary (2019-2023)			
Categories		**N**	**%**
By Collision Type	Single Vehicle Crash	2,472	38.7%
	Multi-Vehicle Crash	3,342	52.3%
	Other	575	9.0%
	Total Number of Crash Reports	**6,389**	**100%**

Comprehensive Motorcycle Crash Summary (2019-2023)

Between 2019 and 2023, a total of 6,389 motorcycle crashes occurred, involving 7,016 people. There was an 8.2% increase in the number of motorcycle crashes from 1,216 in 2019 to 1,316 in 2023. Out of these, 6,564 were motorcyclists (operators), and the remaining 452 were passengers. The data provides a detailed breakdown of the characteristics of these crashes, focusing on various factors such as gender, age, impairment, speeding, helmet use, and the type of collision.

Gender and Person Type Distribution:

In terms of gender, the majority of people involved in motorcycle crashes were male (85.5%), totaling 5,998 individuals. Female individuals accounted for 10.7% of the total, with 752 females involved in crashes. The remaining 266 individuals (3.8%) had an unknown gender. This gender disparity is consistent with broader trends, where males are more likely to be involved in motorcycle crashes due to higher overall motorcycle usage.

When we break the data down by person type (operator vs. passenger), we see a clearer distribution. Among the 6,564 drivers, 5,927 were male drivers (90.3%) and 374 were female drivers (5.7%). The remaining 263 drivers had an unknown gender (4.0%).
In terms of passengers, there were 452 passengers in total. Of these, 378 were female passengers (83.6%) and 71 were male passengers (15.7%). The remaining 3 passengers had an unknown gender (0.7%).

This breakdown highlights that male drivers dominate the data as the largest group involved in crashes, reflecting the higher overall male participation in motorcycling. Interestingly, females make up the majority of passengers involved in crashes, accounting for more than 80% of the passenger group. This disparity between the gender distribution of drivers and passengers suggests that female passengers may be more frequently involved in crashes relative to their lower representation among riders.

Age Group Analysis:

Age-wise, the most significant portion of crash involvement was in the 21-29 age group (23.6%), with 1,654 people. The distribution across other age groups reveals that younger individual, especially those between 21-39 years old, represented a large share of the crashes. For example, the 30-34 age group had 842 individuals (12%), and the 35-39 age group had 721 individuals (10.3%). Conversely, older motorcyclists over the age of 50 made up a smaller portion of the crash data, with those aged 50-59 accounting for 17.2% of the crashes. The youngest group, 15 and under, had the fewest crashes, representing just 1.2% of the total.

Impairment Status:

Regarding impairment, the majority of motorcyclists were not impaired at the time of the crash. Specifically, 95% (6,234 motorcyclists) were not impaired, while only 5% (330 motorcyclists) were found to be impaired. This suggests that impairment, although a contributing factor in a small proportion of crashes, is not the predominant cause in this dataset.

Speeding Factor:

Speeding was a factor in 15.9% of the crashes, with 1,043 motorcyclists involved in speeding-related incidents. The remaining 84.1% (5,521 motorcyclists) were not speeding at the time of their crash. This highlights that, while speeding is a significant factor, the majority of crashes involved motorcyclists who were not exceeding speed limits.

Helmet Use:

Out of a total of 7,016 motorcyclists (including operators and passengers), 70.5% (4,943) were helmeted, while 29.5% (2,073) were unhelmeted. Specifically, among motorcyclists/drivers involved in crashes, 70.2% (4,610) wore helmets, while 29.8% (1,954) did not. This indicates a concerning trend, as a significant portion of motorcyclists involved in crashes were unprotected, which could have serious implications for injury severity in these incidents.

Collision Type:

When considering the type of collisions, multi-vehicle crashes were the most common, making up 52.3% of the incidents (3,342 crashes). In contrast, single-vehicle crashes accounted for 38.7% of the total (2,472 crashes). Other types of collisions made up the remaining 9% (575 crashes). This breakdown suggests that, while many crashes involved a single vehicle, over half of the crashes were the result of collisions with other vehicles, which likely contributed to the severity of these crashes.

Conclusion

The analysis of motorcycle crashes from 2019 to 2023 provides key insights into the demographics, behaviors, and conditions associated with these incidents. Male motorcyclists, particularly in younger age groups, overwhelmingly dominate crash involvement, with the most affected age range being 21-39 years. Interestingly, females are more commonly represented as passengers, highlighting a gender-based distribution between operators and passengers in motorcycle incidents.

The trend over time from 2019 to 2023 reveals an increasing severity of injuries for people involved in crashes, with severe injury crashes rising and a slight decrease in no/minor injury crashes. Fatal injury crashes have shown a small but steady increase, highlighting the need for improved safety measures such as enhanced helmet use and enforcement. Despite high rates of non-impairment, factors such as speeding and helmet non-use emerge as significant risk factors, with approximately 16% of crashes involving speeding and nearly 30% of motorcyclists not wearing helmets at the time of the crash. Helmet use shows a concerning trend, as non-helmeted riders are likely to face higher injury severity, underscoring the importance of helmet laws and enforcement.

Collision types reveal that over half of the incidents involve multiple vehicles, suggesting that interactions with other vehicles on the road contribute to the frequency and potential severity of crashes. In contrast, single-vehicle crashes, though less common, still represent a substantial portion of incidents, likely tied to factors like speeding or loss of control.

These trends highlight the ongoing need for enhanced safety measures to reduce crash severity and improve overall motorcycle safety.

Motorcycle Literature Review_NSC_Nov2024.pdf
Uploaded by: Kathleen Hoke
Position: UNF

Motorcycle Literature Review

Prepared By:

National Study Center for Trauma & EMS (NSC)

University of Maryland, Baltimore

Prepared For:

Maryland Motor Vehicle Administration – Maryland Highway Safety Office

Maryland Department of Transportation

Introduction

Motorcycle safety policy has become a highly debated topic in recent years, frequently discussed by legislators and community members seeking a balanced approach that protects these vulnerable road users without imposing overly restrictive measures. Effectively addressing this issue requires an understanding of the factors fueling the debate. According to the National Highway Traffic Safety Administration, 80% of all motorcycle crashes result in injury or death [1], a statistic that is especially concerning given motorcycles represent a small fraction of all registered vehicles. This literature review seeks to summarize key data on motorcycle safety, examining how the use of protective gear impacts injury outcomes and exploring the relationship between motorcycle type and crash severity.

Impact of Helmet Laws

The relationship between motorcycle helmet laws and injury reduction is well-documented and widely supported. Research on the impact of helmet legislation [2] shows that states in the U.S. with universal helmet laws—a requirement for all riders to wear helmets—experienced a 36% to 45% decrease in motorcycle crash fatalities. In contrast, states with partial helmet laws, which mandate helmet use for only certain groups of riders (e.g., those under a specific age), saw a 22% to 45% increase in fatality rates compared to states with universal helmet mandates. Intriguingly, states with partial helmet laws reported a 1% to 81% increase in fatality rates when compared to states without any helmet law in place, illustrating that partial mandates may not be as effective in reducing fatalities.

Multiple studies reinforce these findings, with research [15, 18] consistently showing a significant reduction in fatalities in states with universal helmet laws. One study found that in areas where helmet mandates were repealed, motorcycle fatalities increased fourfold [14]. These findings align with other evidence suggesting that head injuries are the leading cause of death in motorcycle crashes, and the use of helmets significantly mitigates this risk [13]. In addition to the declining rates associated with motorcycle helmet mandates, the study found that other laws have also been associated with fewer motorcycle fatalities, such as laws restricting acceptable blood alcohol content.

Impact of Helmet Use on Injury Prevention

Research on helmet use and injury reduction has delved into specific factors such as helmet type, fit, and fastening. For example, one study analyzes the effectiveness of different types of motorcycle helmets and their ability to prevent head injury [3]. This study sampled a population of motorcyclists that presented to the emergency department with head injuries over an 8-month period. Motorcyclists who presented to the emergency department but did not sustain a head injury were used as the control group for the study. The study found that motorcyclists that did not use helmets were four times more likely to sustain a head injury, and ten times more likely to sustain a brain injury than riders that used helmets. This increased frequency of head

injury is corroborated in other studies as well [11, 12, 19, 21]. In addition, riders wearing partial-coverage helmets were twice as likely to sustain a head injury or brain injury in comparison to riders with full-face helmets. This study also analyzed the effectiveness of helmet fastening and found that motorcyclists with loosely fastened helmets were twice as likely to sustain a brain injury when compared to riders with firmly fastened helmets.

Emphasizing the importance of helmet fixation, a study in Malaysia explored the effect of helmet fit compared to helmet type. This study observed injured motorcyclists admitted to hospitals and surveyed them on crash details, including helmet usage and fastening. The participants wore various helmet types, including open-face, tropical, and full-face helmets, while some wore no helmet at all. The findings revealed that motorcyclists whose helmets dislodged during the crash were five times more likely to sustain head injuries and four times more likely to suffer severe head trauma. The study concluded that secure helmet fixation plays a more substantial role in preventing head injuries than helmet type alone.

These studies collectively underscore the critical importance of proper helmet usage, fastening, and design in reducing head and brain injuries in motorcycle crashes.

Other Forms of Protective Gear

While there has been extensive research conducted on the efficacy of motorcycle helmets and their ability to mitigate injury, there are other forms of protective clothing for motorcyclists that have not been as thoroughly studied. These garments include motorcycle jackets, gloves, motorcycle pants, and motorcycle boots. However, there have been some studies conducted which highlight the benefits of these pieces of gear. A study conducted by the University of Sydney; Australia interviewed over 200 motorcyclists who sustained some form of injury from a motorcycle crash to gain insight into just how effective motorcycle clothing actually is in terms of mitigating injury. The results of the study showed that motorcyclists who wore a motorcycle jacket, pants, or gloves were significantly less likely to be admitted to a hospital following the crash [5, 20]. The findings further indicate that riders had a significantly reduced risk of injury if those garments were also fitted with body armor. The results also indicate that non-motorcycle boots provided more protection than other forms of casual footwear such as shoes or sneakers. However, no association between the use of body armor and reduced fractures was established, indicating that the armor is only effective at reducing tissue damage.

These findings are reaffirmed by another study also conducted by the University of Sydney that analyzed the effectiveness of protective motorcycle clothing by observing the health outcomes of injured motorcyclists within 6 months following the crash. The methods of the study consist of an initial interview and review of medical records for each subject followed by a mailed survey two and six months after the crash. Subjects were placed in three groups: fully protected (motorcycle jacket and pants), partially protected (motorcycle jacket only), and unprotected

(neither jacket nor pants were used). Unsurprisingly, riders who were partially protected or fully protected were shown to be hospitalized for a shorter duration and reported less pain immediately after the crash in comparison to those within the unprotected group. In the two-month survey, the unprotected group was more likely to have disabilities or reduced physical function than the fully protected and partially protected groups [6]. By the six-month mark, while differences in physical function between groups had diminished, fully protected riders had a higher likelihood of full recovery, with significantly faster recovery times than unprotected riders. These findings align with studies linking helmet use to lower injury severity scores, highlighting the broader value of comprehensive protective gear for motorcyclists in minimizing injury severity and promoting quicker recovery [17].

Relation Between Gear Usage and Bike Type

The use of protective clothing has been viewed from other angles as well. A study featured in Emergency Medicine International highlights the association between the use of protective gear and the type of motorcycle being driven. The goal of the study "Roles of Motorcycle Type and Protective Clothing in Motorcycle Crash Injuries" was to identify subgroups of motorcyclists with a higher accident risk and evaluate the efficiency of protective clothing for preventing injuries [7]. The study analyzed the characteristics of motorcycle crashes over the period of one year and resulted in the inclusion of 226 motorcyclist patients that were recruited through the emergency department. Each subject was interviewed before leaving the ED. The interview focused on information about the accident, what protective clothing was used, location of injury, speed, and alcohol consumption. The patients were then divided into two groups: those that drove light motorcycles, and those that drove heavy motorcycles. For this study, light motorcycles are defined as having an engine limit of $125cm^3$, and heavy motorcycles are defined as having an engine volume greater than $125cm^3$.

The results showed that the usage of helmets and motorcycle pants was significantly higher among heavy motorcycle drivers than light motorcycle drivers; and that jackets, gloves, and shoes were also used more by heavy motorcycle drivers to a lesser degree. The study also found that motorcycle jackets, pants, and shoes were not protective against fractures or systemic injuries but were an effective measure for preventing soft-tissue damage. Ultimately, the study concluded that riders of heavy motorcycles tend to use more protective gear and that light motorcycle riders were the most vulnerable group of road users.

How Motorcycle Type Influences Crash Outcome

This association between motorcycle type and crash outcome is explored further in "Role of motorcycle type in fatal motorcycle crashes", a study featured in the Journal of Safety Research. Specifically, the aim of the study is to explore the association between motorcycle performance capability and risky riding behaviors like speeding. To do this, motorcycles were classified into 10 different types based on certain design characteristics and were then placed into

the following groups: cruiser/standard, touring, sport touring, sport/unclad sport, supersport, and other. The study then analyzed driver death rates per 10,000 vehicles of each type, examining the factors that made the crash fatal. The findings indicate that driver death rates for supersport motorcycles were four times higher than the death rates for cruisers and standard motorcycles [8]. Further, supersport drivers who sustained fatal injuries were most likely to have been speeding. Despite this, these same drivers were shown to be the most likely to wear helmets and least likely to be under the influence of alcohol when compared to drivers of other motorcycle types. Other studies have also found that sport/supersport drivers were more likely to wear protective equipment such as helmets, motorcycle jacket etc. [16]. Overall, increased engine displacement was associated with higher driver death rates for each motorcycle type.

This higher death rate among supersport drivers is reaffirmed by "Characteristics of motorcycle crashes in the US", which analyzes data from fatal motorcycle crashes to identify their contributing factors and trends. The study analyzed data from the Fatality Analysis Reporting System (FARS) between the years 2000-2007 and compared it with motorcycle registration data. The study also used data from the Federal Highway Administration and the Census of Transportation, Vehicle Inventory and Use Survey; the NHTSA National Automotive Sampling System/General Estimates System (NASS/GES); and the Office for Defects Investigation. Some of the factors that were investigated include the association between crash type and location, helmet use, bike type (sport, touring, cruiser), and alcohol impairment. The study posits that helmet use is the most important component of preventing injuries and fatalities in a motorcycle crash, and that motorcyclists without helmets are 40% more likely to sustain a fatal head injury. The study also found that the rate of fatal crashes differed by motorcycle type due to each bike type being largely preferred by different demographic groups. Sport and Super Sport bikes, for example, are very popular among young male riders (age 16-25) who may be less inclined to use protective equipment than riders in other demographics. The findings also highlight that the crash fatality rate is 3 times higher among riders of sport/super sport bikes when compared to touring and cruiser style motorcycles. Further, sport motorcycles are associated with a higher percentage of risky behavior and a higher percentage of high-speed crashes (>65 mph). Findings also indicate a difference in fatality rate of crashes within the sport motorcycle subgroup itself, citing that sport motorcycles with engine sizes above 750 cc have higher rates of fatal crashes than sport motorcycles below 750 cc. In addition to this, an association between helmet use and alcohol-related impairment was discovered. Showing that 30% of fatally injured riders were impaired, and 44% of fatally injured riders were not using helmets. Finally, the study cites NHTSA findings showing that motorcycle fatalities increased by 20% in states that repealed helmet use laws [9].

A study conducted by The Institute of Transport Economics in Norway titled "Traffic safety among motorcyclists in Norway: A study of subgroups and risk factors" further reinforces the previously mentioned trend among sport motorcycles. The study aimed to identify risk factors of motorcycle crashes that are unique to each subgroup of motorcyclist (e.g. age groups, bike types)

by presenting motorcyclists with a questionnaire designed to collect information about rider characteristics, riding behaviors, and accident risk; then comparing those results to analyses of fatal motorcycle crashes in Norway that occurred from 2005 to 2008. The study corroborated the popularity of sport motorcycles among young males and that this group is the most at risk of being involved in fatal crashes. This is because riders within this group were shown to have a combination of low riding experience, higher exhibition of risky behaviors, and poor hazard perception ability [10]. These factors contribute significantly to the higher incidence of fatal crashes among young sport bike riders, who are often either inexperienced with a specific bike type or with motorcycles in general.

Overall, these studies collectively emphasize that while sport and supersport motorcycles attract riders who tend to wear protective gear, these types of bikes are also associated with higher rates of speeding and risky behaviors, which contribute to disproportionately high fatality rates. Helmet use, experience, and specific safety laws are key factors in reducing crash fatalities, especially among high-risk groups such as young, inexperienced sport bike riders.

Conclusion

This review aimed to summarize and synthesize available research on motorcycle protective gear, the influence of motorcycle type on crash characteristics and outcomes, and the interplay between these factors. The analysis reveals a notable gap in the literature, particularly regarding the effect of motorcycle type on crash dynamics and the potential association between protective gear usage and motorcycle type. These areas are underexplored and present valuable directions for future research.

Further studies could specifically investigate the relationship between bike type and crash outcomes by controlling for age demographics, as most research points to young males as the primary owners of sport bikes, which are statistically shown to be the most hazardous. A key question remains: are the elevated crash rates among sport bikes due to their speed capabilities and design, or do they reflect riskier behaviors associated with a younger demographic of riders—behaviors that could potentially manifest across different bike types? As the current population of sport bike riders ages and gains experience, future research might shed light on whether the observed crash trends stem from rider demographics or from inherent risks associated with certain motorcycle types.

References

1. National Highway Traffic Safety Administration. (2003). Motorcycle safety program. *Washington, DC: National Highway Traffic Safety Administration, US Department of Transportation, DOT HS*, *809*, 539.
2. Notrica, David M. MD, FACS, FAAP; Sayrs, Lois W. PhD; Krishna, Nidhi MSc; Davenport, Katherine P. MD, FACS; Jamshidi, Ramin MD, FACS, FAAP; McMahon, Lisa MD, FACS, FAAP. Impact of helmet laws on motorcycle crash mortality rates. Journal of Trauma and Acute Care Surgery 89(5):p 962-970, November 2020. | DOI: 10.1097/TA.0000000000002861
3. Wen-Yu Yu, Chih-Yi Chen, Wen-Ta Chiu, Mau-Roung Lin, Effectiveness of different types of motorcycle helmets and effects of their improper use on head injuries, *International Journal of Epidemiology*, Volume 40, Issue 3, June 2011, Pages 794–803, https://doi.org/10.1093/ije/dyr040
4. Ramli, R., & Oxley, J. (2016). Motorcycle helmet fixation status is more crucial than helmet type in providing protection to the head. *Injury*, *47*(11), 2442-2449, https://doi.org/10.1016/j.injury.2016.09.022
5. de Rome, L., Ivers, R., Fitzharris, M., Du, W., Haworth, N., Heritier, S., & Richardson, D. (2011). Motorcycle protective clothing: protection from injury or just the weather?. *Accident Analysis & Prevention*, *43*(6), 1893-1900, https://doi.org/10.1016/j.aap.2011.04.027
6. de Rome, L., Ivers, R., Fitzharris, M., Haworth, N., Heritier, S., & Richardson, D. (2012). Effectiveness of motorcycle protective clothing: Riders' health outcomes in the six months following a crash. *Injury*, *43*(12), 2035-2045, https://doi.org/10.1016/j.injury.2011.10.025
7. Erdogan, Mehmet Ozgür, Sogut, Ozgur, Colak, Sahin, Ayhan, Harun, Afacan, Mustafa Ahmet, Satilmis, Dilay, Roles of Motorcycle Type and Protective Clothing in Motorcycle Crash Injuries, *Emergency Medicine International*, 2013, 760205, 4 pages, 2013. https://doi.org/10.1155/2013/760205
8. Teoh, E. R., & Campbell, M. (2010). Role of motorcycle type in fatal motorcycle crashes. *Journal of safety research*, *41*(6), 507-512. https://doi.org/10.1016/j.jsr.2010.10.005
9. Padmanaban, J., & Eyges, V. (2009, September). Characteristics of motorcycle crashes in the US. In *Proc. 4th Int. Road Traffic Accid. Database Conf. Road Saf. Data Collect. Anal. Target Setting Monit. Performances Progress, Seoul, South Korea*. Microsoft Word - Final Submitted IRTAD Paper.doc (itf-oecd.org)
10. Bjørnskau, T., Nævestad, T. O., & Akhtar, J. (2012). Traffic safety among motorcyclists in Norway: A study of subgroups and risk factors. *Accident Analysis & Prevention*, *49*, 50-57. https://doi.org/10.1016/j.aap.2011.09.051

11. Chiang, M. F., Chiu, W. T., Chao, H. J., Chen, W. L., Chu, S. F., Chen, S. J., ... & Tsai, S. H. (2006). Head injuries in adolescents in Taiwan: a comparison between urban and rural groups. *Surgical neurology*, *66*, S14-S19. https://doi.org/10.1016/j.surneu.2006.08.029
12. Yunus, S. S. M., Ngeow, W. C., & Ramli, R. (2015). Pediatric craniomaxillofacial injuries after road traffic crashes: characteristics of injuries and protective equipment use. The American Journal of Emergency Medicine, 33(9), 1253-1257. https://doi.org/10.1016/j.ajem.2015.05.009
13. Unkuri, J., Salminen, P., Sihvola, N., & Kosola, S. (2024). On a collision course: fatal motorcycle and bicycle accidents of adolescents in Finland from 2008 to 2019. *European journal of public health*, *34*(2), 267-271. 10.1093/eurpub/ckad198
14. Hotz, G. A., Cohn, S. M., Popkin, C., Ekeh, P., Duncan, R., Johnson, E. W., ... & Selem, J. (2002). The impact of a repealed motorcycle helmet law in Miami-Dade County. *Journal of Trauma and Acute Care Surgery*, *52*(3), 469-474. Journal of Trauma and Acute Care Surgery
15. Houston, D. J. (2007). Are helmet laws protecting young motorcyclists?. *Journal of Safety Research*, *38*(3), 329-336. 10.1016/j.jsr.2007.05.002
16. Buckley, L., Bingham, C. R., Flannagan, C. A., Carter, P. M., Almani, F., & Cicchino, J. B. (2016). Observation of motorcycle helmet use rates in Michigan after partial repeal of the universal motorcycle helmet law. *Accident Analysis & Prevention*, *95*, 178-186. https://doi.org/10.1016/j.aap.2016.07.009
17. Wiznia, D. H., Kim, C. Y., Dai, F., Goel, A., & Leslie, M. P. (2016). The effect of helmets on motorcycle outcomes in a level I trauma center in Connecticut. *Traffic injury prevention*, *17*(6), 633-637. https://doi.org/10.1080/15389588.2015.1136059
18. Lin, J. W., Lin, C. M., Tsai, J. T., Hung, K. S., Hung, C. C., & Chiu, W. T. (2008). *Neurotrauma research in Taiwan* (pp. 113-117). Springer Vienna.
19. Croce, M. A., Zarzaur, B. L., Magnotti, L. J., & Fabian, T. C. (2009). Impact of motorcycle helmets and state laws on society's burden: a national study. *Annals of surgery*, *250*(3), 390-394. 10.1097/SLA.0b013e3181b365a2
20. Patel, P. B., Staley, C. A., Runner, R., Mehta, S., & Schenker, M. L. (2019). Unhelmeted motorcycle riders have increased injury burden: a need to revisit universal helmet laws. *Journal of surgical research*, *242*, 177-182. https://doi.org/10.1016/j.jss.2019.03.023
21. Gupta, S., Klaric, K., Sam, N., Din, V., Juschkewitz, T., Iv, V., ... & Park, K. B. (2018). Impact of helmet use on traumatic brain injury from road traffic accidents in Cambodia. *Traffic injury prevention*, *19*(1), 66-70. 10.1080/15389588.2017.1342821

MD State Council Emergency Nurses Assoc Lisa Tenne

Uploaded by: Lisa Tenney

Position: UNF

EMERGENCY NURSES ASSOCIATION
Maryland State Council
Safe Practice Safe Care

To: Maryland Senate Judiciary Proceedings Committee
Senate Office Building
Annapolis, MD 21401

Date: February 4, 2025

Re: **SB 397 Vehicle Laws – Protective Headgear Requirement – Exception (In Remembrance of Gary "Pappy" Boward)**
UNFAVORABLE oral testimony

Good day Chairman Smith, Vice Chair Waldstreicher, Committee members,

My name is Lisa Tenney, and I am testifying on behalf of The Maryland Emergency Nurses Association in OPPOSITION to **SB 397 Vehicle Laws – Protective Headgear Requirement – Exception** (In Remembrance of Gary "Pappy" Boward).

The Maryland Emergency Nurses Association submitted a joint unfavorable written testimony to the Committee along with Advocates for Auto and Highway Safety and SMARTER (Skilled Motorcyclist Association - Responsible, Trained and Educated Riders, Inc.) Upon further examination of this proposed bill to repeal Maryland's highly effective ALL MOTORCYCLE RIDERS requirement to wear a helmet, here are more thoughts.

For the motorcyclist, this is an "emotional" issue. As Americans, they want their "freedom" to choose not to wear a helmet so that they can "feel the wind blow through their hair" to enhance their riding experiences. They want to be able to choose this momentary joy and choose to take the risk that they may very well cause their own death, or a long term injury, or unspeakable pain to their families, or possibly become a burden to the Maryland taxpayers, should they need long term care from a traumatic brain injury.

This is also an "emotional" issue for emergency nurses. Not because it is difficult to physically care for trauma victims - it is a privilege for us to use our skills and expertise to care for any trauma victim. The emotional part for emergency nurses is caring for the patients' loved ones when they arrive to see their husband, father, son, or daughter who has either been killed or maimed in a motorcycle crash. It is especially hard when a traumatic brain injury could have been prevented had the motorcyclist only worn a helmet. These families are devastated and brokenhearted as they face their forever-changed lives. We do not have answers for them when they ask, "Why wasn't he wearing his helmet?" This is OUR emotional issue.

Of the many hats emergency nurses wear, the easiest one is to advocate for injury prevention and zero vehicle related deaths. We would prefer that taxpayer money be spent preventing injuries rather than caring for patients with traumatic brain injuries. This is our emotional reason for being here before you today: to advocate for the prevention of morbidity (death) and mortality (injury).

Please stay the course on requiring helmets for all motorcyclists in Maryland. Please prioritize public safety above emotion. Maryland cannot afford to spend money on taking care of patients who needlessly sustained long term injuries.

Maryland's emergency nurses thank you in advance for an **UNfavorable bipartisan review of SB 397**.

Respectfully,

Lisa Tenney

Lisa Tenney, BSN, RN, CEN, CPHRM, FAEN
Chair, Government Affairs
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SB 397 - JPR - PHPA - LOO.docx (1).pdf
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Position: UNF

Maryland
DEPARTMENT OF HEALTH

Wes Moore, Governor · Aruna Miller, Lt. Governor · Laura Herrera Scott, M.D., M.P.H., Secretary

February 4, 2025

The Honorable William C. Smith Jr.
Chair, Judicial Proceedings Committee
2 East Miller Senate Office Building
Annapolis, MD 21401-1991

RE: Senate Bill (SB) 397 – Motorcycles - Protective Headgear Requirement - Exception (In Remembrance of Gary "Pappy" Boward) – Letter of Opposition

Dear Chair Smith and Committee members:

The Maryland Department of Health (the Department) respectfully submits this letter of opposition for Senate Bill (SB) 397 – Motorcycles - Protective Headgear Requirement - Exception (In Remembrance of Gary "Pappy" Boward). SB 397 would establish an exception to the prohibition against operating or riding on a motorcycle without certain protective headgear if the individual is at least 21 years old, and/or (1) licensed to operate a motorcycle for at least two years, (2) has completed a motorcycle rider safety course approved by the Administrator or the Motorcycle Safety Foundation, or (3) is a passenger on a motorcycle operated by an individual described in (1) or (2) of this exemption.

The National Highway Traffic Safety Administration (NHTSA) estimates that protective headgear, such as helmets, saved the lives of 1,872 motorcyclists in 2017.[1] In Maryland alone, helmets saved an estimated 43 lives in 2017.[1] According to NHTSA's National Center for Statistics and Analysis, protective headgear is approximately 37% effective in preventing fatalities to motorcyclists.[2] Furthermore, motorcycle helmet use can reduce the risk of traumatic brain injury (TBI) up to 69%.[3]

[1] National Center for Statistics and Analysis. (2019). Lives saved in 2017 by restraint use and minimum-drinking-age laws (Traffic Safety Facts Crash*Stats. Report No. DOT HS 812 683). Washington, DC: National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683

[2] National Center for Statistics and Analysis. (2019). Lives and costs saved by motorcycle helmets, 2017. Traffic Safety Facts Crash*Stats (Report No. DOT HS 812 867). Washington, DC: National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812867

[3] Liu BC, Ivers R, Norton R, Boufous S, Blows S, Lo SK, Helmets for preventing injury in motorcycle riders (Review), The Cochrane Library, Issue 1, 2009.
Available online at: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004333.pub3/abstract

A universal helmet law is the most effective method for preventing motorcyclist injuries and fatalities.[4] According to the Centers for Disease Control and Prevention (CDC), "on average states with universal helmet laws save eight times more lives per 100,000 motorcycle registrations each year compared to states without a helmet law and save three times more lives per 100,000 motorcycle registrations each year compared to states with a partial helmet law,"[5] which only require specific groups to wear helmets. In 2020, NHTSA reported that there were about five times more motorcyclist fatalities in states without a universal helmet law compared to states with universal helmet laws.[6]

In addition to the human toll taken in deaths and injuries, motorcycle crashes carry a sizable financial cost to society. In 2022, the CDC reported that combined costs (i.e., medical, loss of work, loss of quality of life, etc.) for nonfatal motorcycle crash injuries in the U.S. was over $27 billion for hospitalizations and $15 billion for emergency department visits.[7] According to the CDC, motorcycle fatalities alone cost Maryland approximately $873 million in 2022, based on medical costs and the total value of statistical life.[8]

Maryland's universal motorcycle helmet law is an effective public health strategy aimed at significantly reducing motorcycle-related injuries and fatalities. Rolling back the law to only cover riders under 21 years old will result in increased serious injuries and deaths along with substantial economic costs.

If you would like to discuss this further, please do not hesitate to contact Sarah Case-Herron, Director of Governmental Affairs at sarah.case-herron@maryland.gov.

Sincerely,

Laura Herrera Scott, M.D., M.P.H.
Secretary

[4] Center for Disease Control and Prevention. (2011). *Motorcycle safety: How to save lives and save money.* Atlanta, GA: National Center for Injury Prevention and Control (U.S.). Division of Unintentional Injury Prevention; Centers for Disease Control and Prevention (U.S.). https://stacks.cdc.gov/view/cdc/5974

[5] Governor Highway Safety Association. (2018). *Motorcyclist Traffic fatalities by state: 2017 preliminary data.* Washington, DC: Governors Highway Safety Association

[6] National Center for Statistics and Analysis. (May, 2022). *Motorcycles: 2020 data* (Traffic Safety Facts. Report No. DOT HS 813 306). National Highway Traffic Safety Administration.

[7] Centers for Disease Control and Prevention, National Centers for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. {accessed 2025 Jan 30}. Available from: www.cdc.gov/injury/wisqars

[8] Ibid.

SB 397 APCIA Opposes Motorcycle Helmet 0204 202
Uploaded by: Nancy Egan
Position: UNF

Testimony of

American Property Casualty Insurance Association (APCIA)

Senate Judicial Proceedings Committee

Senate Bill 397 - Vehicle Laws - Protective Headgear Requirement - Exception (In Remembrance of Gary "Pappy" Boward)

February 4, 2025

Letter of Opposition

The American Property Casualty Insurance Association (APCIA) is a national trade organization whose members write approximately 68% of the U.S. property-casualty insurance market. The bill would provide an exception for drivers over the age of 21 years of age who have been licensed to operate a motorcycle for at least 2 years and completed certain motorcycle safety courses not to wear a helmet **OR** their passenger who is at least 21 years old. APCIA appreciates the opportunity to provide written comments in opposition to Senate Bill 397.

Compared with cars, motorcycles are an especially dangerous form of travel. Motorcycles are capable of very rapid acceleration and high-top speeds. They are less stable than cars in emergency braking and less visible to other motorists. Motorcyclists do not have the protection of a vehicle structure around them, leaving riders vulnerable to contact with hard road surfaces, other vehicles, and fixed objects such as trees. This is why wearing a helmet, as well as other protective clothing, is so important.

A total of 6,222 motorcyclists were killed in crashes in 2022, nearly triple the number in 1997 and 23% higher than in 2019. This is the highest number of motorcyclist crash deaths in a single year since the National Highway Traffic Safety Administration (NHTSA) began collecting fatal motor vehicle crash data in 1975.[1]

Motorcyclists accounted for 15% of all crash deaths in 2022. However, per mile traveled, the number of deaths on motorcycles in the U.S. was nearly 29 times the number in passenger vehicles.

Helmets are proven to decrease the severity of head injuries, the likelihood of death and the cost of medical care. Helmets are highly effective in preventing brain injuries, which often require extensive treatment and may result in lifelong disability. NHTSA estimates that in the event of a crash, un-helmeted motorcyclists are 3 times more likely than helmeted riders to suffer traumatic brain injuries, and that motorcycle helmets reduce the likelihood of a crash fatality by 37 -42 percent. [2] Norvell and Cummings found a 39 percent reduction in the risk of death after adjusting for the effects of rider age, gender, and seat position [3]. A literature review estimated that helmets reduce the risk of death in a crash by 42 percent and the risk of head injuries by 69 percent.[4]

Helmet Laws Change Behaviors

In 2023, 94 percent of motorcyclists observed in states with universal helmet laws were wearing helmets. In states without such laws, helmet use was 72 percent[5]. The use of helmets judged to be compliant with federal safety

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[1] Insurance Institute of Highway Safety, https://www.iihs.org/topics/motorcycles#do-helmets-work
[2] Id.
[3] *Id.*
[4] *Id.*
[5] *Id.*

regulations was 83 percent among motorcyclists in states with universal helmet laws and 60 percent in states without such laws.

In a national telephone survey of motorcyclists, 22 percent of those who said they believe helmets keep riders safer reported not always wearing helmets while riding [6]. However, only 6 percent of motorcyclists in states with universal laws reported not always wearing helmets, suggesting that education alone would not be as beneficial in increasing helmet use as a universal helmet law.

The Public Supports Helmet Laws

According to a 2000 national telephone survey, 81 percent of respondents reported that they favored mandatory helmet use laws for motorcyclists. Support was more prevalent among females (88 percent) than males (72 percent) and among non-motorcyclists (83 percent) than those who drove motorcycles (51 percent). Support was higher in states requiring all riders to wear helmets (84 percent) compared with states with lesser requirements (75 percent) or no requirements (79 percent). [7]

In an Institute survey of motorcyclists conducted in 2009, 45 percent said they favor universal helmet laws.[8] Those who favor universal laws were more likely to report that they believe helmets keep riders safer than those who do not favor universal helmet laws (87 percent vs. 65 percent). Among motorcyclists who reported not always wearing helmets while riding, 57 percent said that a helmet law would encourage full-time helmet use.

Helmet Laws Reduce Deaths, Injuries and Medical Costs

In states that either reinstated or enacted universal motorcycle helmet laws, deaths and injuries of motorcyclists decreased. In states that repealed or weakened their universal helmet laws, deaths and injuries typically rose.[9]

Un-helmeted riders have higher health care costs as a result of their crash injuries, and many lack health insurance. A 2002 review of 25 studies of the costs of injuries from motorcycle crashes reported that helmet use reduced the cost of medical treatment, length of hospital stay and probability of long-term disability for riders injured in a crash. [10] Studies that looked at who pays for injured riders' medical care found that just over half of injured riders have private health insurance coverage. For those without private insurance, most of the medical costs are paid by the government. A more recent study confirmed the earlier findings that un-helmeted riders had much higher hospital charges than helmeted ones. [11]

For these reasons, APCIA urges the Committee to provide an unfavorable report on Senate Bill 397.

Nancy J. Egan,

State Government Relations Counsel, DC, DE, MD, VA, WV

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[6] *Id.*
[7] *Id.*
[8] *Id.*
[9] *Id.*
[10] *Id.*
[11] *Id.*

SB 397 UNFAV Statement 2-4-25.pdf
Uploaded by: Omar Masood
Position: UNF

Statement of Omar Masood, Director of State Government Relations, Advocates for Highway and Auto Safety;
Lisa Tenney, BSN, RN, CEN, CPHRM, FAEN, Chair, Government Affairs, Maryland State Council Emergency Nurses Association;
Xu Simon, Ph.D., President and CEO, Skilled Motorcyclist Association - Responsible, Trained and Educated Riders, Inc. (SMARTER)
UNFAVORABLE: In Opposition to Senate Bill 397
Senate Judicial Proceedings Committee
Maryland General Assembly
February 4, 2025

Advocates for Highway and Auto Safety (Advocates) is an alliance of consumer, safety, medical, public health and law enforcement groups and insurance companies working together to pass highway and auto safety laws that prevent crashes, save lives, reduce injuries, and contain costs. The Emergency Nurses Association (ENA) is the premier professional nursing association dedicated to defining the future of emergency nursing through advocacy, education, research, innovation, and leadership. The Skilled Motorcyclist Association - Responsible, Trained and Educated Riders, Inc. (SMARTER) is a non-profit association of riders who support all-rider helmet use laws. Our organizations thank you for the opportunity to provide testimony jointly in opposition to Senate Bill (SB) 397, legislation that would repeal Maryland's all-rider motorcycle helmet use law. This critical safety law has been preventing deaths and injuries and saving taxpayer dollars in Maryland for nearly 33 years. To repeal the all-rider motorcycle helmet use law would be a deadly and costly mistake.

Motor Vehicle Crash Fatalities Remain Historically High, Including Riders of Motorcycles, the Most Hazardous Form of Motor Vehicle Transportation.[i]
In 2022, 6,218 motorcyclists were killed in the U.S., the highest number of fatalities on record.[ii] An additional 82,687 motorcyclists were injured in the same year.[iii] Early estimates for 2023 indicate a 2 percent increase in motorcyclist fatalities over 2022.[iv] Motorcycle riders are nearly 28 times more likely to die in a crash than passenger vehicle occupants.[v] Data show that dangerous driving behaviors, including speeding, alcohol-impairment and driver distraction, continue to contribute to deadly outcomes, especially for vulnerable road users (VRU), including motorcycle riders, who lack the protective structure of a passenger vehicle.

Traffic safety is a serious issue that requires improvement rather than the dismantling of the state's all-rider motorcycle helmet use law, a proven traffic safety countermeasure. Over the five-year period of 2019 to 2023, an average of 77 fatal crashes and 936 injury crashes involving a person riding a motorcycle occurred each year in Maryland.[vi] On Maryland roadways, 80 motorcyclists lost their lives in 2023 while crash impacts on motorcycle riders exceeded the five-year average in both fatalities and injuries.[vii] Overall traffic fatalities in the state rose 40 percent over the ten-year period 2014-2023.[viii]

Motorcycle Helmet Use, Bolstered by All-Rider Helmet Laws, is a Proven Lifesaver.
Research affirms motorcycle helmet use saves lives and prevents injuries. According to a report by the U.S. Government Accountability Office (GAO), laws requiring all motorcyclists to wear helmets are the only strategy proven to be effective in reducing motorcyclist fatalities.[ix] Motorcycle helmet use reduces the risk of head injury by 69 percent and reduce the risk of death by 42 percent.[x] The National Highway Traffic Safety Administration (NHTSA) estimates that helmet use saved the lives of 1,872 motorcycle riders in 2017 (the latest year data is available) and that 749 more lives in all states could have been saved if all motorcycle riders had worn helmets.[xi] After Maryland enacted its all-rider motorcycle helmet law in 1992, the motorcyclist death rate (per 10,000 registered motorcycles) from crashes dropped 56 percent over a five-year period.[xii]

State laws requiring all riders to wear helmets are extremely effective in achieving helmet use. Data released from the NHTSA show that in states with all-rider helmet use laws, use of helmets compliant with federal standards is 83

percent, compared to just 66 percent in states without such a law.[xiii] According to NHTSA, in 2022, there were 7.7 times as many unhelmeted fatalities (1,986 fatalities) in states without a universal helmet use law compared to states with a universal helmet law (258 fatalities).[xiv] These states were similar with respect to total resident populations.[xv] A recent analysis from the Insurance Institute for Highway Safety (IIHS) calculated that between 1976 and 2022, over 22,000 additional lives could have been saved if all states had enacted all-rider motorcycle helmet laws.[xvi] The data are clear – Maryland's all-rider helmet requirement is working to ensure motorcycle helmet use and the safety of motorcycle riders.

Motor Vehicle Crashes, Especially Involving Motorcycles, are Costly to All Marylanders. Helmet Use Reduces Preventable Expenditures.

Traffic crashes impose a physical, emotional, and financial toll on Maryland families. In 2019, the cost of crashes in Maryland surpassed $5.9 billion – essentially resulting in a "crash tax" on each Marylander of $977.[xvii] When updated for inflation alone, in 2024, costs would equate to $7.4 billion to the state and $1,225 per resident respectively.[xviii]

Annually, motorcycle rider crashes cost nearly $17 billion in economic impacts and $107 billion in societal harm as measured by comprehensive costs based on 2019 data.[xix] Accounting for inflation alone, in 2024, this would equate to over $21 billion in economic impacts, and over $131 billion in societal harm.[xx] Serious injuries and fatalities accounted for 83 percent of total comprehensive costs of motorcyclist crashes, compared to 60 percent of the total comprehensive costs of all motor vehicle crashes.[xxi] Traumatic brain injury is a serious, potentially life-long injury that can result from a motorcyclist crash, especially when the rider is not wearing a helmet. In addition to changes in social, cognitive and physical ability, costs for lifetime care for a traumatic brain injury can easily amount to millions of dollars.

Conversely, in 2019, motorcycle helmet use prevented $21.2 billion in societal harm costs, but another $9.4 billion could have been prevented if all motorcycle riders had worn helmets.[xxii] Updating for inflation only, in 2024 this would equate to $26 billion in societal harm prevented and over $11.5 billion if all riders had worn helmets.[xxiii] Helmet use reduces the cost of medical treatment, length of hospital stay and probability of long-term disability for those riders injured in crashes. The provisions in SB 397 to ostensibly alleviate the risks posed by riders and their passengers riding without a helmet, specifying the exception is for those age 21 and older, mandating two years riding experience and passing a safety course, fail to mitigate the severe and serious damages that will be caused by repealing the state's all-rider motorcycle helmet use law. Further, there is no scientific evidence that motorcycle rider training reduces crash risk and is an adequate substitute for an all-rider helmet law. Such a law is also unenforceable for reasons addressed below.

All Rider Motorcycle Helmet Use Law Repeals Have Resulted in Increased Deaths, Injuries and Associated Costs.

Experience and data have proven that states which repeal an all-rider motorcycle helmet use law always experience an increase in rider deaths, serious and disabling brain injuries, and medical costs usually borne by taxpayers and the state. In Michigan, which repealed its all-rider law in 2012, there would have been 26 fewer motorcycle crash deaths (a 21 percent reduction) if the helmet use mandate was still in place that year, according to the University of Michigan Transportation Research Institute.[xxiv] Time has only exacerbated the problem as motorcyclist deaths were 64 percent higher in 2022 compared to 2011.[xxv] [xxvi] Missouri experienced similar results after repealing its all-rider helmet use law. Helmetless motorcycle rider deaths increased a staggering 567 percent from 2019, the last year the all-rider law was in effect, to 2021, the first full year without the law.[xxvii]

Furthermore, "minors only" helmet laws, such as SB 397 seeks to enact, are ineffective, unenforceable, and unpopular. According to the American Academy of Pediatrics, in states with weak youth-specific helmet laws, use decreased, and youth mortality increased. Serious traumatic brain injury among youth was 38 percent higher in states with age-specific laws compared to states with all-rider helmet use laws.[xxviii] After Florida repealed its all-rider helmet use law in 2000, the fatality rate (per 10,000 registered motorcycles) jumped 21 percent. Deaths of riders under the age of 21 who were not helmeted increased 188 percent, even though the law still applied to them.[xxix] Enforcing laws for only young riders is problematic since it is very difficult, if not impossible in certain roadway

environments, for law enforcement to estimate a rider's age. It is also impossible to determine training or length of experience operating a motorcycle in such circumstances.

The Public is Concerned about Roadway Safety and Supports All-Rider Helmet Laws.
A public opinion poll commissioned by Advocates found that overwhelming majorities of respondents were "extremely" or "very" concerned about dangerous driving behaviors and scenarios.[xxx] Two-thirds of poll respondents indicated that they do not think enough is being done to reduce dangerous behavior on our roadways.[xxxi] Further, the American public understands the need for all-rider helmet laws and overwhelmingly supports them as demonstrated by the American Automobile Association (AAA) Foundation Traffic Safety Culture Index, which found more than four in five Americans (82 percent) support a law requiring all motorcycle riders to wear a helmet.[xxxii] Removing basic safety protections, including Maryland's all-rider helmet law, runs contrary to public opinion.

If SB 397 is passed, it will result in more deaths, injuries, and an increased financial burden on Maryland's emergency services and hospitals and ultimately, every Maryland taxpayer. **Advocates, ENA Maryland State Council, and SMARTER urge you to oppose SB 397.** Thank you.

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i The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised), NHTSA, Feb. 2023, DOT HS 813 403, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403.

ii Traffic Safety Facts: 2022 Data, Motorcycles, NHTSA, July 2024 (Revised), DOT HS 813 589, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813589.

iii Ibid.

iv Traffic Safety Facts, Crash Stats: Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2023, NHTSA, May 2024, DOT HS 813 581, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813581.

v Traffic Safety Facts. 2020 Data: Motorcycles, NHTSA, May 2022, DOT HS 813 306.

vi Crash Summary Report – Motorcycle Involved (2023), Maryland Department of Transportation available at: https://zerodeathsmd.gov/resources/crashdata/.

vii Ibid.

viii Maryland Crash Data – Rates (2023), Maryland Department of Transportation, available at https://zerodeathsmd.gov/resources/crashdata/.

ix Motorcycle Safety: Increasing Federal Funding Flexibility and Identifying Research Priorities Would Help Support States' Safety Efforts, U.S. Government Accountability Office (GAO), November 2012, available at: https://www.gao.gov/products/gao-13-42

x Liu BC, Ivers R, Norton R, Boufous S, Blows S, Lo SK, Helmets for preventing injury in motorcycle riders (Review), The Cochrane Library, Issue 1, 2009. Available online at: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004333.pub3/abstract.

xi Traffic Safety Facts: 2021 Data, Motorcycles, NHTSA, Jun. 2023 (Revised), DOT HS 813 466, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813466 .

xii Autopsy Study of Motorcyclist Fatalities: The Effect of the 1992 Maryland Motorcycle Helmet Use Law, American Journal of Public Health 1352-1355, 92:8, August 2002.

xiii Traffic Safety Facts, Research Note: Motorcycle Helmet Use in 2023 – Overall Results, NHTSA, Sept. 2024, DOT HS 813 634, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813634.

xiv Traffic Safety Facts 2021 Data: Motorcycles, National Highway Traffic Safety Administration NHTSA, June 2023, DOT HS 813 466, available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813466; 2020 Population and Housing State Data, US Census Bureau, August 2021, available at https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html.

xv Traffic Safety Facts. 2020 Data: Motorcycles, National Highway Traffic Safety Administration (NHTSA), May 2022, DOT HS 813 306, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813306; 2020 Population and Housing State Data, US Census Bureau, available at https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html.

xvi The human cost of allowing unhelmeted motorcycling in the United States, Oct. 2024, IIHS, available at: https://www.iihs.org/topics/bibliography/ref/2317.

xvii The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (revised), The National Highway Traffic Safety Administration (NHTSA), February 2023, DOT HS 813 403, available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403.

xviii CPI Inflation Calculator, BLS, January 2019 to January 2024 dollars, available at https://data.bls.gov/cgi-bin/cpicalc.pl.

xix The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised), National Highway Traffic Safety Administration (NHTSA), February 2023, DOT HS 813 403, available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403.

xx CPI Inflation Calculator, BLS, January 2019 to January 2024 dollars, available at https://data.bls.gov/cgi-bin/cpicalc.pl.

xxi The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised), National Highway Traffic Safety Administration (NHTSA), February 2023, DOT HS 813 403, available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403

xxii The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised), National Highway Traffic Safety Administration (NHTSA), February 2023, DOT HS 813 403, available at: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403.

xxiii CPI Inflation Calculator, BLS, January 2019 to January 2024 dollars, available at https://data.bls.gov/cgi-bin/cpicalc.pl.

xxiv Analysis of Motorcycle Crashes: Comparison of 2012 to Previous Years, 18th Michigan Traffic Safety Summit, 2013.

xxv NHTSA State Traffic Safety Information for Michigan (2022), accessible at https://cdan.dot.gov/stsi.htm.

xxvi "Michigan traffic deaths fall 5 percent in 2011". *New Haven Register*. (2012, April 20), available at: https://www.nhregister.com/news/article/Michigan-traffic-deaths-fall-5-percent-in-2011-11520391.php.

xxvii State Traffic Safety Information for Missouri (2022), NHTSA, available at https://cdan.dot.gov/stsi.htm.

xxviii Youth Motorcycle-Related Brain Injury by State Helmet Law Type: United States 2005-2007, Pediatrics, Vol. 126, No. 6, 2010.

xxix Traffic Safety Facts: Motorcycle Helmet Use Laws, National Highway Traffic Safety Administration (NHTSA), January 2008, DOT HS 810 887W, available at: https://www.nhtsa.gov/sites/nhtsa.gov/files/810887.pdf.

xxx Public Concern About Roadway Safety, ENGINE's CARAVAN Survey, January 2022, available at: https://saferoads.org/wp-content/uploads/2022/01/Advocates-January-2022-Poll-Report-Final.pdf#page=4.

xxxi Public Concern About Roadway Safety, ENGINE's CARAVAN Survey, January 2022, available at: https://saferoads.org/wp-content/uploads/2022/01/Advocates-January-2022-Poll-Report-Final.pdf#page=4.

xxxii 2017 Traffic Safety Culture Index, AAA Foundation for Traffic Safety, March 2018, available at: https://aaafoundation.org/wp-content/uploads/2018/03/TSCI-2017-Report.pdf.

SB0397 - MVA - LOO - Motorcycle - Protective Headg

Uploaded by: Patricia Westervelt

Position: UNF

February 4, 2025

The Honorable William C. Smith, Jr.
Chair, Senate Judicial Proceedings
2 East, Miller Senate Office Building
Annapolis, MD 21401

RE: Letter of Opposition – Senate Bill 397 – Motorcycles - Protective Headgear Requirement - Exception (In Remembrance of Gary "Pappy" Boward)

Dear Chair Smith and Committee Members:

The Maryland Department of Transportation (MDOT) respectfully opposes Senate Bill 397 but offers the following information for the Committee's consideration.

SB 397 creates an exception to the motorcycle helmet requirement for individuals who are at least 21 years of age and who have either been licensed to operate a motorcycle for at least two years or have completed a motorcycle rider safety course approved by the Administrator of the MDOT Motor Vehicle Administration (MVA) or the Motorcycle Safety Foundation.[1]

Currently, all motorcycle riders, including passengers, must wear motorcycle helmets that comply with Federal Motor Vehicle Standard (FMVSS) No. 218. The use of motorcycle helmets has proven effective in reducing serious head injuries among motorcyclists involved in crashes with no substantive adverse safety effects. Nevertheless, 14 percent of motorcycle riders and passengers who die on average each year on Maryland roadways were not wearing a helmet. Each year, on average, there are 75 fatalities, and 1,150 injuries involving motorcycle riders and passengers on Maryland roadways.

The Governors Highway Safety Association (GHSA) found that when a universal helmet law is repealed, helmet use drops substantially. The State of Michigan repealed its universal helmet law in 2012, and according to the Michigan State Police, annual fatalities from motorcycle-involved crashes saw an increase of 23 percent compared to pre-repeal. The GHSA urges states to oppose efforts to repeal universal motorcycle helmet laws and encourages states to adopt helmet use laws for all riders.

According to the National Highway Traffic Safety Administration (NHTSA), helmet use is substantially lower in states that do not have a universal helmet law. In 2021, 96% of motorcyclists observed in states with universal helmet laws were wearing helmets. In states without such laws, helmet use was 57%. Use of helmets judged to be compliant with federal

[1] Additionally, SB 397 authorizes passengers who are at least 21 years old to ride without a helmet if the motorcycle is operated by an individual that meets the conditions noted above.

safety regulations was 86% among motorcyclists in states with universal helmet laws and 53% in states without such laws.

Currently, 17 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands have universal helmet laws. Motorcycle licensure carries no requirements to gain experience or improve skills over time. A rider may obtain a motorcycle license and never again ride a motorcycle. Under the provisions of SB 397, a rider who has held a motorcycle license for two years but who has no further riding experience would be exempt from the helmet use requirement, as would anyone over the age of 21 taking the motorcycle safety course; and any passenger 21 years or older.

The Maryland MVA-approved motorcycle rider safety courses encourage the use of full protective riding gear by riders and passengers when operating and riding on a motorcycle. SB 397 permits a person to ride without a helmet simply because the rider has completed the approved rider safety course, regardless of how recently that safety training was completed.

For these reasons, the Maryland Department of Transportation respectfully requests an unfavorable vote on Senate Bill 397.

Respectfully submitted,

Christine E. Nizer
Administrator
Maryland Motor Vehicle Administration
410-787-7830

Matt Mickler
Director of Government Affairs
Maryland Department of Transportation
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SB397 MACHO
Uploaded by: Ruth Maiorana
Position: UNF

2025 SESSION
POSITION PAPER

BILL:	**SB 397 – Motorcycles – Protective Headgear Requirement – Exception (In Remembrance of Gary "Pappy" Boward)**
COMMITTEE:	**Senate – Judicial Proceedings Committee**
POSITION:	**Letter of Opposition**
BILL ANALYSIS:	**SB 397 would establish an exception to the prohibition against operating or riding on a motorcycle without certain protective headgear for an individual at least 21 years of age who has been licensed to operate a motorcycle for at least 2 years or has completed a certain safety course and for the individual's passenger.**

POSITION RATIONALE: The Maryland Association of County Health Officers (MACHO) **strongly opposes SB 397**. For well over a decade, MACHO has testified in person or sent written opposition to efforts to repeal MD's motorcycle helmet law. SB 397 t is regressive and, if passed, will take us back to 1979, when the helmet law was repealed. Because of the repeal, deaths and injuries climbed, leading to reinstatement of the law in 1992. *This is one instance when maintaining the status quo is best for Maryland.*

Public health policies are steeped in science and data. The data from health and traffic safety experts in this area is ***irrefutable***. The Centers for Disease Control (**CDC**)'s research has demonstrated that **helmets:**

- **reduce the risk of death by 37% and the risk of head injury by 69%**
- **do not reduce visibility or impair hearing**
- ***save more than $1 billion if all motorcyclists wore helmets***, each year in the U.S.

The **National Highway Traffic Safety Administration (NHTSA)** estimates that **protective headgear saved the lives of 1,872 motorcyclists in 2017**. If all motorcyclists had worn helmets, an additional 749 lives could have been saved, and in Maryland, helmets have **saved an additional 43 lives** in 2017. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683

Maryland's helmet law must remain a universal law, not a partial law. There is strong, substantial, and clear evidence that universal helmet laws save lives, prevent injury, and save money. This is not true for partial laws. Nationally, riders 30 years and older account for over 70% of all motorcycle fatalities. More riders over the age of 50 died in 2019 than riders under the age of 30. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813112

Non-helmeted riders injured in a crash have substantially higher healthcare costs than helmeted riders. When a rider is insured, these costs are passed on to others in the form of higher health insurance premiums. When the rider is uninsured, medical expenses may be paid for using taxpayers' funds. According to the CDC, in 2013 motorcycle fatalities cost Maryland $96M. **In 2017, motorcycle helmet use saved MD nearly $100M in direct economic costs and over $590M in comprehensive costs (economic plus valuation for lost quality of life).** If every motorcyclist had worn a helmet, comprehensive costs savings would have been an additional $65M. https://crashstats.nhtsa.dot.gov/Api/Public/Publication/812867

Helmets are an effective, low cost, and non-intrusive way to prevent death and catastrophic injuries that affect many in our communities. When a non-helmeted motorcycle rider crashes and is injured, many are impacted and traumatized – not just the individual rider. This includes families who must now care for their loved one or say

goodbye, the EMTs who arrive on the scene, the nurses and doctors who treat and rehabilitate the patient; the employer who lost a good worker, the insurer who is paying the bills, and society who has lost a valuable member.

Maryland has a long history of supporting public health and public safety. This is accomplished by data-driven decision-making backed by science, facts, and subject matter experts. Some of the greatest improvements in health and life expectancy over the last 100+ years are due to the very measures enacted on behalf of public health.

Maryland has many public health laws and regulations to ensure safety while pursuing activities that are potentially dangerous and life-threatening. These include seatbelt laws, life vest laws, hunter wearing orange/pink laws, car seat laws, cell phone laws, and speeding laws. ***These laws are safety provisions that do not restrict the ability of an individual to participate in the desired activity***. Now is not the time to change what is working for our communities.

For these reasons, the Maryland Association of County Health Officers **submits this letter of opposition for SB 397**. For more information, please contact Ruth Maiorana, MACHO Executive Director at rmaiora1@jhu.edu or 410-937-1433. *This communication reflects the position of MACHO.*