Spotlight on Highway Safety

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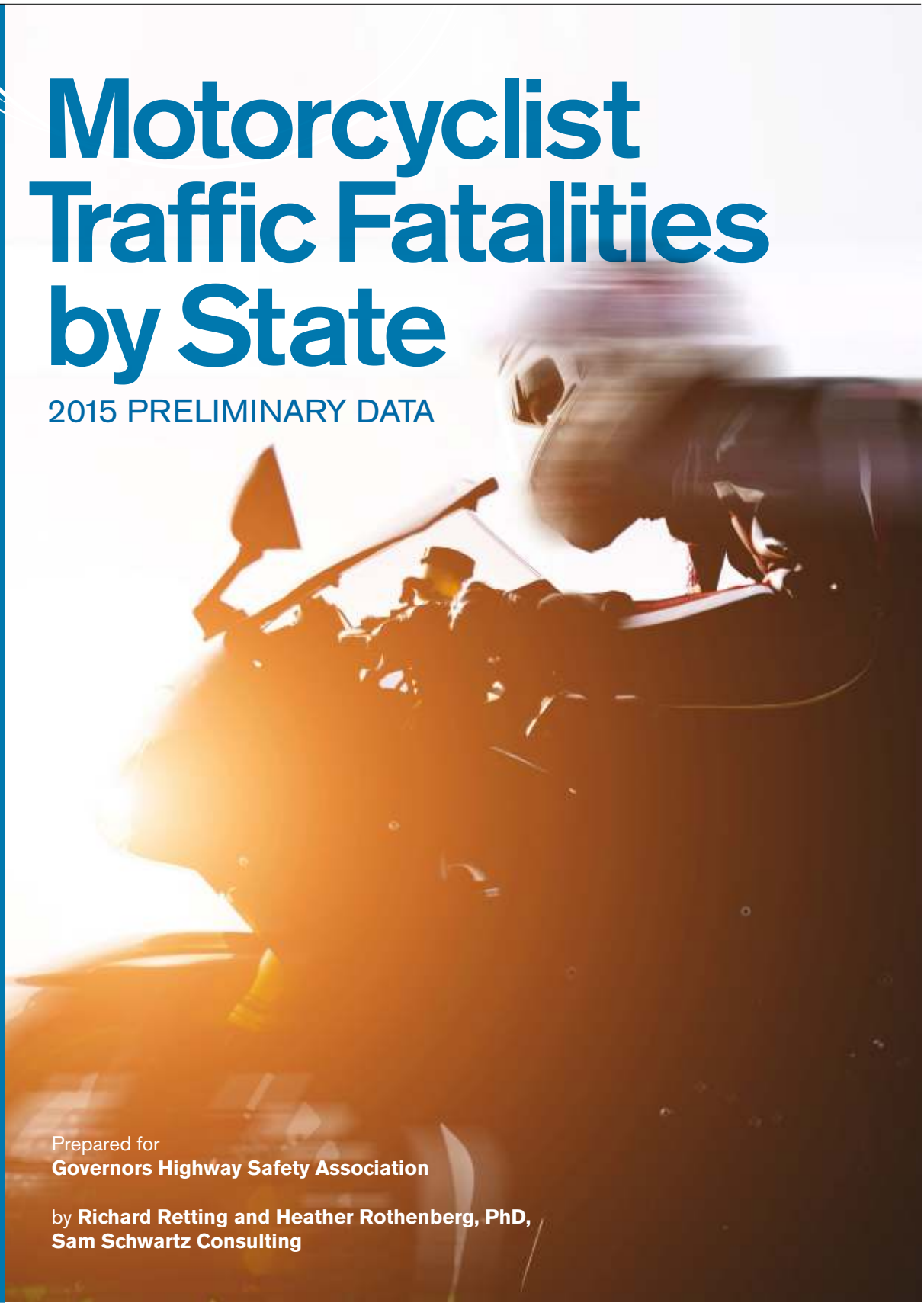
Motorcyclist Traffic Fatalities by State

2015 PRELIMINARY DATA



Prepared for
Governors Highway Safety Association

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Motorcycle Traffic Fatalities by State

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Motorcycle Traffic Fatalities by State

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SUMMARY

Motorcyclist fatalities in the United States are expected to have increased by 10 percent in 2015 compared with 2014 (more than 450 additional fatalities), based on preliminary data supplied to the Governors Highway Safety Association (GHSA) by the 50 states and the District of Columbia. This increase follows two years in which the number of motorcyclist fatalities decreased. GHSA estimates the total number of motorcyclist fatalities reported by the 50 states and the District of Columbia for 2015 will be 5,010, compared with 4,548 for 2014. This would be only the third year in which more than 5,000 motorcyclist fatalities were recorded.

GHSA's latest survey indicates the following:

- States reported a range of decreases, increases, and unchanged number of motorcyclist fatalities in 2015 compared with 2014:
  - 31 states had increases in motorcyclist fatalities;
  - 16 states had decreases; and
  - 3 states and the District of Columbia remained the same.
- States differ widely in fatality numbers:
  - The number of motorcyclist deaths in 2015 ranged from 3 in the District of Columbia to 550 in Florida.
  - The percentage of all motor vehicle deaths that are motorcyclists varies considerably and indicates the prominence of the problem by state. In 2014, the range was from 7 percent in Mississippi and North Dakota to 26 percent in Hawaii.
- States use various combinations of engineering, enforcement and education countermeasures to address motorcyclist safety, including targeted traffic enforcement in conjunction with public outreach and education.

Many factors contribute to changes in the number of motorcyclist fatalities, including economic conditions, demographics, weather conditions, fuel prices, and the amount of motor vehicle travel. Travel monitoring data published by FHWA indicates that motor vehicle travel by all vehicles increased by 3.5 percent (+107 billion vehicle miles) in 2015 as compared with 2014[1]. Cumulative travel for 2015 (over 3.1 trillion miles) was the highest number of vehicle miles traveled ever reported by FHWA. Many states noted that warmer and drier weather in 2015 led to an extended riding season.

The number of motorcycle fatalities is high relative to the mid-1990s when half as many motorcyclist deaths occurred on U.S. roads. In contrast, the annual number of overall traffic fatalities declined by more than 20 percent over the same 20-year period.

Motorcycling is a risky form of transportation, especially when combined with factors such as lack of helmet use, speeding, alcohol, and invalid licensure. Motorcycles are less stable than four-wheeled vehicles, and – unlike passenger vehicles – provide no protection when riders are in crashes. Motorcyclists are susceptible to serious injury in collisions with larger motor vehicles, which are prone to violate motorcyclists' right of way because of the smaller visual target they present.

1 FHWA. 2016. Traffic Volume Trends, December 2015.

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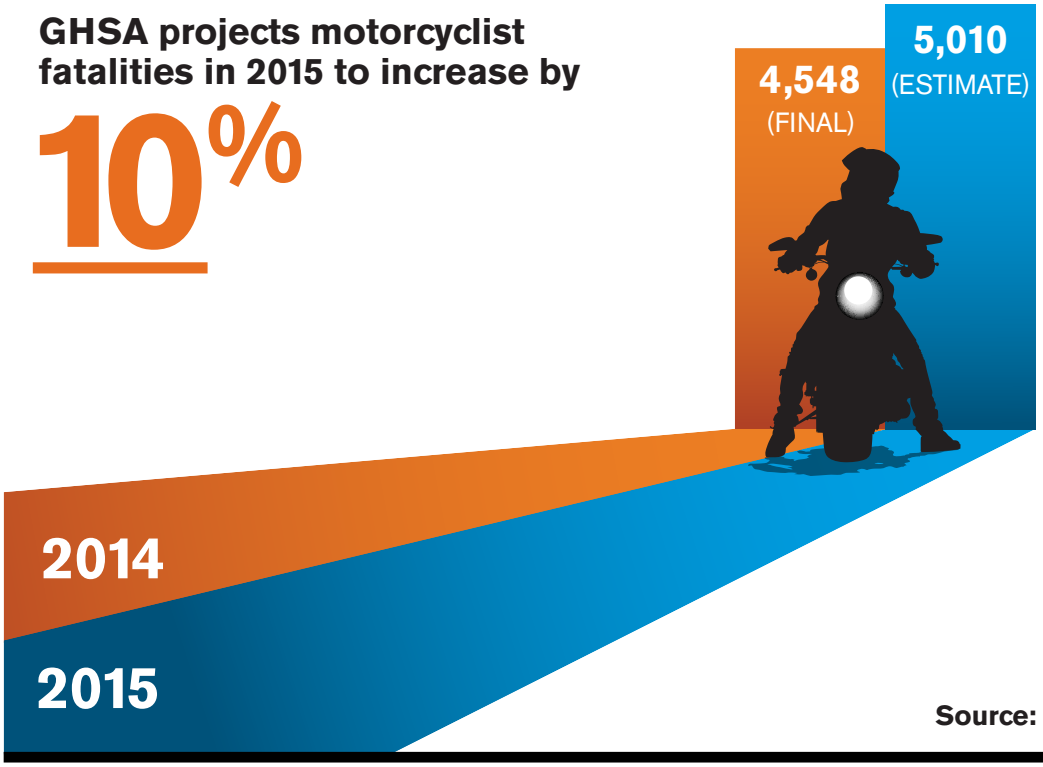
GHSA projects motorcyclist fatalities in 2015 to increase by

10%



Source: GHSA

Helmet use laws covering all motorcyclists in the 32 states that lack them could save many lives. In Michigan, which saw a 23 percent increase in motorcyclist fatalities, state highway safety officials noted the repeal of Michigan's all-rider helmet law in 2012 has been a factor in a portion of the increase in fatalities to motorcyclists, due to fewer riders wearing helmets, which decreases the chances of surviving a crash. Even in states with helmet use laws, not all specify that helmets should be DOT-compliant, meeting federal safety standards. This requirement could also improve enforceability of helmet laws and the level of protection offered by helmets.

One favorable trend is the increasing availability of antilock brakes, which have been shown to decrease fatal motorcycle crashes by preventing a motorcycle's wheels from locking during braking and assisting with maintaining the stability of the motorcycle.

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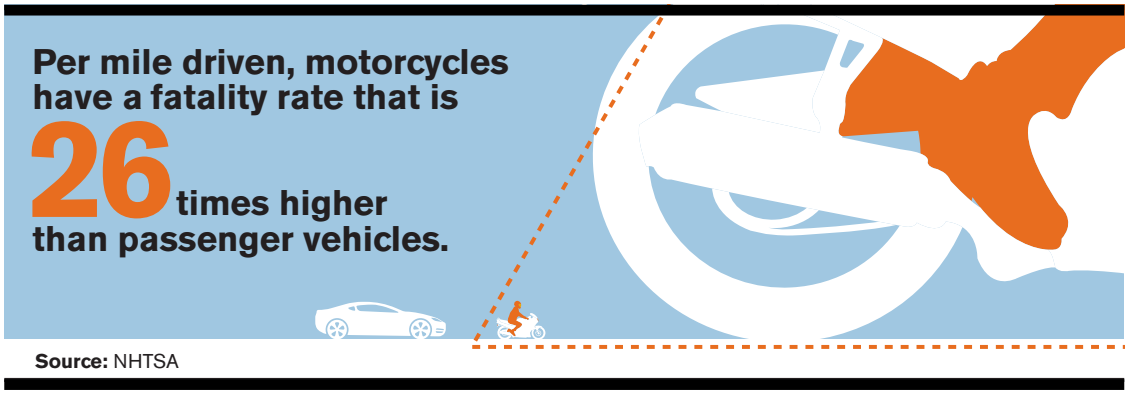
INTRODUCTION

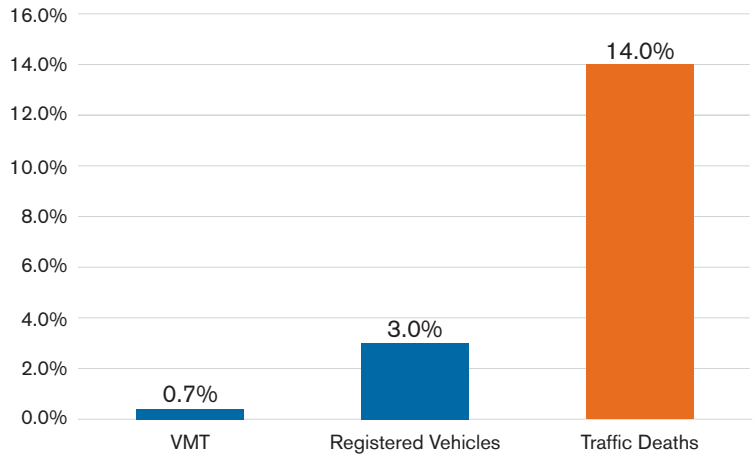
Motorcycles are less stable than four-wheeled vehicles and lack protective vehicle structure to minimize injuries when crashes occur. The result is substantially higher fatality rates for motorcyclists, whether based on registered vehicles or miles driven. **Per mile driven, fatality rates for motorcyclists were 26 times that of passenger vehicle occupants in 2013** (NHTSA, 2015).



Source: NHTSA

Motorcycles comprise only three percent of registered vehicle and less than one percent of vehicle miles traveled (VMT)[2]. Despite their limited presence, motorcycles currently account for nearly 15 percent of all motor vehicle fatalities, as Figure 1 illustrates. This percentage has grown in recent years. Motorcyclist fatalities rose between 1975 and 1980, and then declined steadily to a low of 2,116 in 1997. As shown in Table 1, fatalities began to rise in 1998 and increased by 151 percent (2,116 to 5,312) through 2008. Since then (2009 – 2014), the average annual number of motorcyclist fatalities has been 4,644. During the 1997 – 2014 timeframe, motorcyclists' share of total motor vehicle deaths rose from 5 percent to 14 percent (Figure 2).

Figure 1: Motorcycles as a Percent of VMT, Registered Vehicles, and Traffic Deaths, 2014



Source: FHWA Highway Statistics and FARS

2 FHWA. 2016. Highway Statistics 2014 Data: https://www.fhwa.dot.gov/policyinformation/statistics/2014/

Motorcycle Traffic Fatalities by State

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Table 1

Motorcyclist Fatalities and Percent of Total Traffic Fatalities, 1990-2014

Source: FARS

Year	Motorcyclist Fatalities	Total Traffic Fatalities	Motorcyclist Deaths as a Percent of Total Traffic Fatalities
1990	3,244	44,599	7%
1991	2,806	41,508	7%
1992	2,395	39,250	6%
1993	2,449	40,150	6%
1994	2,320	40,716	6%
1995	2,227	41,817	5%
1996	2,161	42,065	5%
1997	2,116	42,013	5%
1998	2,294	41,501	6%
1999	2,483	41,717	6%
2000	2,897	41,945	7%
2001	3,197	42,196	8%
2002	3,270	43,005	8%
2003	3,714	42,884	9%
2004	4,028	42,836	9%
2005	4,576	43,510	11%
2006	4,837	42,708	11%
2007	5,174	41,259	13%
2008	5,312	37,423	14%
2009	4,469	33,883	13%
2010	4,518	32,999	14%
2011	4,612	32,479	14%
2012	4,986	33,782	15%
2013	4,692	32,719	14%
2014	4,586	32,675	14%

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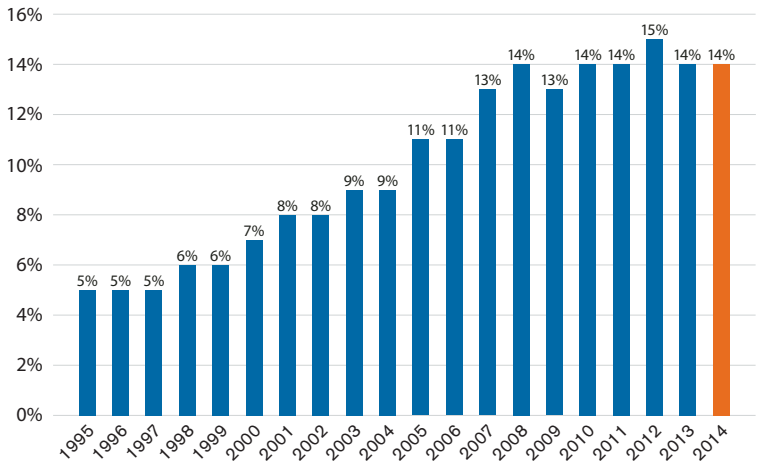
Figure 2: Motorcyclist Deaths as a Percent of Total Motor Vehicle Deaths, 1995 – 2014



Source: FARS

In addition to the role that increased motorcycling activity might play in the growing percentage of motorcyclist fatalities as a proportion of total traffic deaths, another factor may be the larger and more consistent declines in occupant fatalities, attributed in part to steady enhancements in vehicle crashworthiness and crash avoidance technology. By contrast, motorcyclists remain just as susceptible to injuries when involved in a crash.

In any case, the large increase in fatalities between 1997 and 2008 is clearly linked to the doubling of the number of registered motorcycles, from 3,826,373 to 7,752,926. The 2009 break in the pattern of yearly increases in motorcyclist deaths is likely attributable to the severe economic recession of the time, resulting in less travel for recreational purposes[3]. A case can be made that the increase in motorcyclist fatalities in 2012 was strongly influenced by unusually warm and dry periods in much of the country for many of the months[4].

Influences of exposure on the number of motorcyclist fatalities in 2014 compared with recent years are not entirely clear. Figure 3 shows changes in the reported numbers of vehicle miles traveled (VMT) by motorcycles and the number of motorcycles registered. These are the most current national data available.

3 GHSA (2010). Motorcyclist traffic fatalities by state; 2009 preliminary data. Washington D.C.

4 GHSA (2013). Motorcyclist traffic fatalities by state; 2012 preliminary data. Washington D.C.

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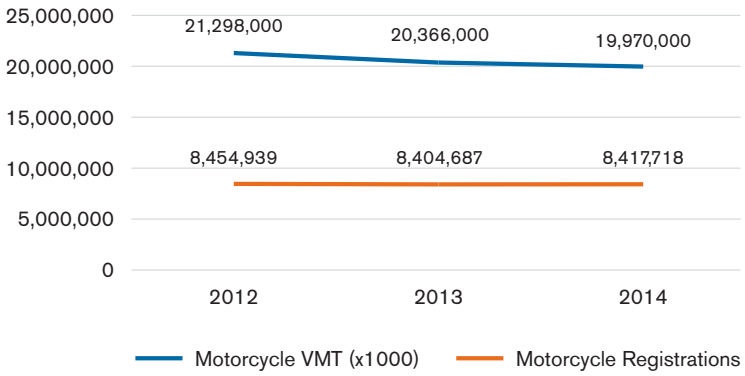
Figure 3: Trends in Motorcycle VMT and Registrations

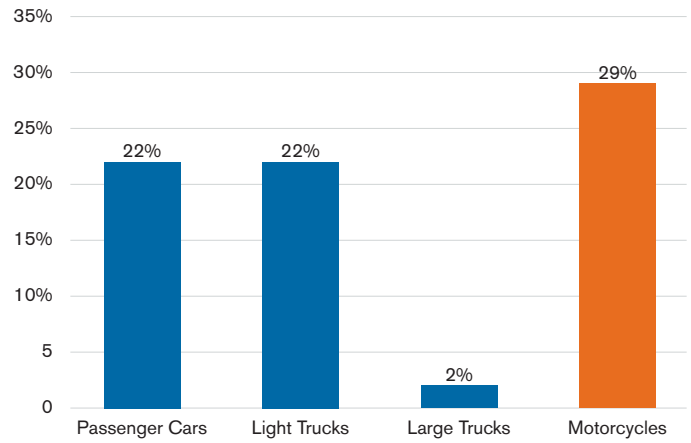


Source: Federal Highway Administration

Although the number of vehicle miles traveled by motorcycles declined in 2014, travel monitoring data published by FHWA indicates that motor vehicle travel by all vehicles increased by 3.5 percent (+107 billion vehicle miles) in 2015 as compared with 2014[5]. Cumulative travel for 2015 (over 3.1 trillion miles) was the highest number of vehicle miles traveled ever reported by FHWA.

Alcohol impairment is a major contributing factor in many fatal motorcycle crashes. Drivers and riders are considered alcohol-impaired when their blood alcohol concentrations (BACs) are .08 grams per deciliter (g/dL) or higher. Based on national estimates of alcohol-involved crashes generated by NHTSA (2016), the percentage of operators with BACs of .08 g/dL or higher in fatal crashes in 2014 was highest for motorcycle riders (29%), compared to drivers of passenger cars (22%), light trucks (22%), and large trucks (2%). Figure 4 illustrates this data.

Figure 4: Percent of Drivers with BACs ≥ .08 in Fatal Crashes, 2014



Source: FARS

5 FHWA. 2016. Traffic Volume Trends, December 2015.

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2015 GHSA SURVEY

The continuing interest in motorcyclist safety prompted GHSA to undertake the present study for 2015. Using the same methods as in the six prior motorcycle fatality studies, State Highway Safety Offices (SHSOs) were asked to provide preliminary counts of motorcyclist deaths that occurred in 2015. This provides an early look at 2015 trends, many months before final federal Fatality Analysis Reporting System (FARS) data for 2015 are available, typically toward the end of the following year.

It should be noted that the reported state data are preliminary and in some cases incomplete. All 50 states and the District of Columbia (DC) provided counts of motorcyclist deaths for 2015. GHSA emphasizes that the counts provided are preliminary, drawn from state traffic records systems. The data are adjusted for expected underreporting, based on past experience.

MOTORCYCLIST DEATHS, 2014 AND 2015

The number of motorcyclist deaths for 2014 and 2015 reported by the states are presented in Table 2. Based on these preliminary state data, the SHSO-reported number of motorcyclist fatalities increased 6 percent (prior to adjustment for underreporting), from 4,548 in 2014 to 4,837 in 2015. Motorcyclist fatalities increased in 31 states, decreased in 16 states, and stayed the same in 3 states plus the District of Columbia.

Eight states reported increases of 20 fatalities or more, while only two states reported decreases this large. The largest increase (100) was reported in Florida, and the largest decrease (38) was reported in California.

Tables 3 and 4 present this data sorted by total number of fatalities and percentage change from 2014.

Motorcycle Traffic Fatalities by State

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Table 2

Motorcyclist Fatalities by State for 2014 and 2015

Source: State Highway Safety Offices

State	2014	2015 (Preliminary)	% Change from 2014 to 2015	
			#	%
Alabama	76	77	1	1%
Alaska	8	11	3	38%
Arizona	130	130	0	0%
Arkansas	61	77	16	26%
California	527	489	-38	-7%
Colorado	94	106	12	13%
Connecticut	54	45	-9	-17%
Delaware	15	20	5	33%
District of Columbia	3	3	0	0%
Florida	450	550	100	22%
Georgia	140	131	-9	-6%
Hawaii	25	26	1	4%
Idaho	27	27	0	0%
Illinois	118	146	28	24%
Indiana	125	104	-21	-17%
Iowa	51	39	-12	-24%
Kansas	47	41	-6	-13%
Kentucky	79	85	6	8%
Louisiana	83	83	0	0%
Maine	11	31	20	182%
Maryland	69	74	5	7%
Massachusetts	39	46	7	18%
Michigan	112	138	26	23%
Minnesota	44	59	15	34%
Mississippi	41	37	-4	-10%
Missouri	87	90	3	3%
Montana	23	25	2	9%
Nebraska	20	26	6	30%
Nevada	61	54	-7	-11%
New Hampshire	17	26	9	53%
New Jersey	61	49	-12	-20%
New Mexico	43	37	-6	-14%
New York	134	156	22	16%
North Carolina	182	185	3	2%
North Dakota	10	8	-2	-20%
Ohio	140	162	22	16%
Oklahoma	55	80	25	45%
Oregon	46	57	11	24%
Pennsylvania	186	179	-7	-4%
Rhode Island	10	9	-1	-10%
South Carolina	120	184	64	53%
South Dakota	29	17	-12	-41%
Tennessee	120	123	3	3%
Texas	451	455	4	1%
Utah	45	36	-9	-20%
Vermont	7	12	5	71%
Virginia	90	79	-11	-12%
Washington	68	76	8	12%
West Virginia	26	32	6	23%
Wisconsin	72	81	9	13%
Wyoming	16	24	8	50%
TOTAL	4,548	4,837*	+289	Average +6%*

*Prior to adjustment for expected under-reporting.

Motorcycle Traffic Fatalities by State

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Table 3 (left table)

Estimated Motorcyclist Fatalities in 2015 Sorted by Number

Source: State Highway Safety Offices

Table 4 (right table)

Percent Change in Motorcyclist Fatalities, 2014 vs. 2015

Source: State Highway Safety Offices

State	Motorcyclist Fatalities
Florida	550
California	489
Texas	455
North Carolina	185
South Carolina	184
Pennsylvania	179
Ohio	162
New York	156
Illinois	146
Michigan	138
Georgia	131
Arizona	130
Tennessee	123
Colorado	106
Indiana	104
Missouri	90
Kentucky	85
Louisiana	83
Wisconsin	81
Oklahoma	80
Virginia	79
Arkansas	77
Alabama	77
Washington	76
Maryland	74
Minnesota	59
Oregon	57
Nevada	54
New Jersey	49
Massachusetts	46
Connecticut	45
Kansas	41
Iowa	39
Mississippi	37
New Mexico	37
Utah	36
West Virginia	32
Maine	31
Idaho	27
New Hampshire	26
Nebraska	26
Hawaii	26
Montana	25
Wyoming	24
Delaware	20
South Dakota	17
Vermont	12
Alaska	11
Rhode Island	9
North Dakota	8
District of Columbia	3
U.S. Total	4,837*

State	Percentage Change from 2014 to 2015
Maine	182%
Vermont	71%
South Carolina	53%
New Hampshire	53%
Wyoming	50%
Oklahoma	45%
Alaska	38%
Minnesota	34%
Delaware	33%
Nebraska	30%
Arkansas	26%
Oregon	24%
Illinois	24%
Michigan	23%
West Virginia	23%
Florida	22%
Massachusetts	18%
New York	16%
Ohio	16%
Colorado	13%
Wisconsin	13%
Washington	12%
Montana	9%
Kentucky	8%
Maryland	7%
Hawaii	4%
Missouri	3%
Tennessee	3%
North Carolina	2%
Alabama	1%
Texas	1%
Arizona	0%
District of Columbia	0%
Idaho	0%
Louisiana	0%
Pennsylvania	-4%
Georgia	-6%
California	-7%
Mississippi	-10%
Rhode Island	-10%
Nevada	-11%
Virginia	-12%
Kansas	-13%
New Mexico	-14%
Connecticut	-17%
Indiana	-17%
New Jersey	-20%
North Dakota	-20%
Utah	-20%
Iowa	-24%
South Dakota	-41%
U.S. Average	+6%*

Percentage Change Up

Percentage Change Down

*Prior to adjustment for expected under-reporting.

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The actual change in the number of motorcyclist deaths in 2015 is expected to be more than the 6 percent increase reported in Table 2 because some deaths are likely not yet recorded in state traffic records systems. In prior GHSA studies, the final motorcyclist fatality counts in FARS were approximately 4.5 percent higher than the preliminary counts. It seems reasonable, therefore, to assume an undercount of at least 4 percent in the preliminary data provided by the states. Increasing the preliminary 2015 count by 4 percent would mean there were an estimated 5,010[6] motorcyclist deaths in 2015, compared with 4,548 reported for 2014. This leads to the conclusion that **there has been an estimated 10 percent increase in motorcyclist fatalities between 2014 and 2015, based on analysis of preliminary data for 2015.**

Three states – California, Florida, and Texas – accounted for 31 percent of the total motorcyclist fatalities reported by SHSOs in 2015. These three states account for 27 percent of the U.S. population according to the 2015 U.S. Census.

MOTORCYCLIST CRASH TRENDS AND PATTERNS

The percentage of all motor vehicle deaths that are motorcyclists illustrates the wide variance of the prominence of the problem by state. In 2014, the range was from 7 percent in Mississippi and North Dakota to 26 percent in Hawaii. In two other states, 20 percent or more of the deaths were motorcyclists: Connecticut (22%) and Nevada (22%). In addition to Mississippi and North Dakota, in four other states, motorcyclists represented fewer than 10 percent of all deaths: Alabama (8%), Maine (8%), Nebraska (9%) and Oklahoma (9%).

Table 5 presents the data for all 50 states and the District of Columbia.

6 Note that due to unusually large under-reporting of preliminary fatality data in California in previous GHSA Spotlight reports, the preliminary data in Tables 2 and 3 were adjusted to account for anticipated under-reporting, and thus California was excluded from the 4 percent adjustment applied to the overall fatality count.

Motorcycle Traffic Fatalities by State

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Table 5

Motorcyclist Deaths as a Percent of Total Motor Vehicle Deaths, 2014

Source: FARS

Sorted by State

State	Motorcyclist Fatalities as % of Total Traffic Deaths
Alabama	8%
Alaska	11%
Arizona	17%
Arkansas	13%
California	17%
Colorado	19%
Connecticut	22%
Delaware	12%
DC	13%
Florida	19%
Georgia	12%
Hawaii	26%
Idaho	13%
Illinois	13%
Indiana	17%
Iowa	16%
Kansas	12%
Kentucky	13%
Louisiana	11%
Maine	8%
Maryland	16%
Massachusetts	13%
Michigan	12%
Minnesota	13%
Mississippi	7%
Missouri	12%
Montana	12%
Nebraska	9%
Nevada	22%
New Hampshire	18%
New Jersey	11%
New Mexico	12%
New York	14%
North Carolina	15%
North Dakota	7%
Ohio	14%
Oklahoma	9%
Oregon	13%
Pennsylvania	15%
Rhode Island	19%
South Carolina	15%
South Dakota	13%
Tennessee	12%
Texas	13%
Utah	18%
Vermont	16%
Virginia	13%
Washington	15%
West Virginia	10%
Wisconsin	14%
Wyoming	11%
U.S. Average	14%

Sorted by Percent of Total Traffic Deaths

State	Motorcyclist Fatalities as % of Total Traffic Deaths
Hawaii	26%
Connecticut	22%
Nevada	22%
Colorado	19%
Rhode Island	19%
Florida	19%
New Hampshire	18%
Utah	18%
California	17%
Arizona	17%
Indiana	17%
Iowa	16%
Vermont	16%
Maryland	16%
Pennsylvania	15%
Washington	15%
North Carolina	15%
South Carolina	15%
Wisconsin	14%
New York	14%
Ohio	14%
Idaho	13%
Massachusetts	13%
Arkansas	13%
District of Columbia	13%
Oregon	13%
Virginia	13%
Kentucky	13%
Illinois	13%
Minnesota	13%
Texas	13%
South Dakota	13%
Tennessee	12%
Kansas	12%
Michigan	12%
Delaware	12%
New Mexico	12%
Montana	12%
Missouri	12%
Georgia	12%
Louisiana	11%
New Jersey	11%
Alaska	11%
Wyoming	11%
West Virginia	10%
Nebraska	9%
Oklahoma	9%
Maine	8%
Alabama	8%
North Dakota	7%
Mississippi	7%
U.S. Average	14%

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As part of the 2015 survey, states were asked to note any observations regarding trends among specific demographic groups (e.g., young riders, women, or older motorcyclists) or in contributing factors. Some common themes were identified.

Age

Numerous states reported that motorcyclists killed in traffic crashes are often middle aged. Florida noted significant increases in motorcyclist fatalities in both the 35-44 age group (50%) and 55-64 age group (47%). Wisconsin noted the average age of motorcyclist fatalities was 47 in 2015, versus 30 in 1995. New York suggested that crashes/fatalities among older returning riders may be due in part to rusty skills and the increased power of today's motorcycles.

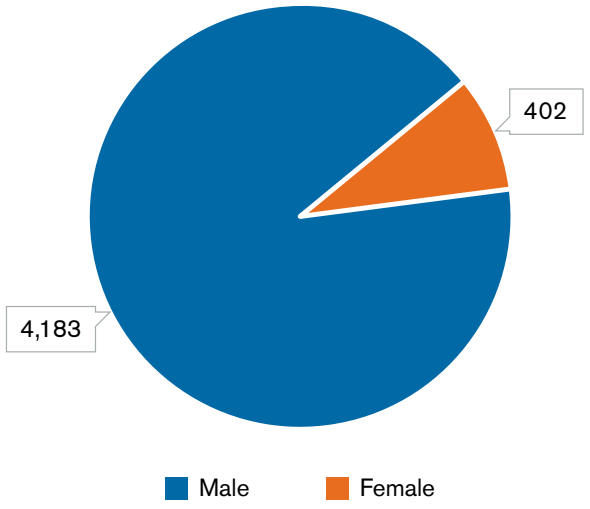
But despite the prevalence of middle aged riders in fatal crashes, states also identified concerns with younger riders. In Alabama, young adult (21-25 years) motorcyclist fatalities rose from 9 in 2014 to 15 in 2015. Forty percent of motorcycle fatalities in Maryland involved younger males, ages 21-35. And in Texas, 20- to 29-year-old males comprised the majority of motorcycle deaths.

Gender

Several states noted that most motorcyclists involved in crashes are almost exclusively male. Others identified potential or evolving concerns with female riders. Women motorcyclist fatalities in Alabama increased from 5 in 2014 to 10 in 2015. And in Pennsylvania, more women are registering and attending training courses.

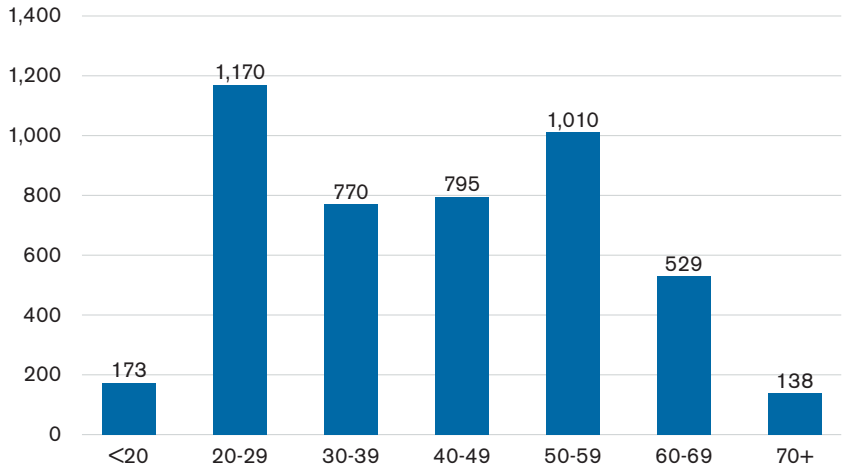
Figures 5 and 6 provide the most current national demographic data for motorcyclist fatalities. More than 90 percent of motorcyclists killed in 2014 were male. In terms of age, although riders ages 40 and older accounted for more than half of motorcyclist fatalities in 2014, the largest single age group, accounting for 25 percent of fatally injured motorcyclists, was 20-29 year olds.

Figure 5: Motorcyclist Fatalities by Gender, 2014



Source: FARS

Figure 6: Motorcyclist Fatalities by Age Group, 2014



Source: FARS

RISK FACTORS

The major motorcycle crash and fatality risk factors have long been established:

- Lack of helmet use;
- Alcohol involvement;
- Speeding; and
- Invalid licensure.

As part of the survey, SHSOs were asked to identify factors that might have contributed to increases or decreases in their state's motorcycle fatalities in 2015. Several states with relatively large increases in motorcyclist fatalities identified the following potential factors:

Alcohol/Drugs

Several states indicated alcohol and other drugs as contributing factors in motorcyclist fatalities. Hawaii noted that in 2014, 15 out of 25 (60%) of fatally-injured riders tested positive for alcohol and/or drugs. In Michigan, motorcyclist crashes involve the presence of alcohol and/or drugs more often than crashes of any other vehicle type. Oregon noted that marijuana was legalized for recreational use in 2015, and as a result, some medical examiners are now testing for the presence of THC. A number of autopsies showed that riders had THC in their systems at some level at the time of their crash.

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Warmer Weather

Numerous states identified favorable weather conditions as a primary factor that likely contributed to increases in motorcycle fatalities in 2015. SHSO observations included:

- Above average temperatures that allowed an early start to the riding season.
- A significantly longer riding season in 2015 than 2014 that led to more bikes on the road for longer period of time.
- Perfect weather, as it rarely rained on a weekend.
- The months of October and November had unseasonably warmer and dryer weather.

Other Reported Factors

- The very low figure in 2014 appears to be the anomaly.
- 2015 included a dramatic increase in moped rider deaths, which, when added to the increase in motorcyclist deaths, yielded an historic high for the state.
- Improving economy, with cheaper gas prices, means increased vehicle miles travel and more exposure.
- One area where an increase was found in 2015 is related to the urban environment. Urban crashes rose from 30 fatalities in 2014 to 44 fatalities in 2015. Another increase in 2015 involved intersections, where motorcyclist fatalities increased from 16 in 2014 to 33 in 2015. These indicators suggest more people are riding motorcycles in the urban environment.
- Our state continues to experience continual increases in population. This increase in population and the low price of gasoline add more riders to busy and crowded Colorado roadways increasing the population that may be involved in crashes.
- We believe the repeal of Michigan's all rider helmet law in 2012 has been a factor in a portion of the increase in injuries and fatalities to motorcyclists.

In Iowa, which saw a preliminary 24 percent decrease in motorcycle fatalities from 2014, the SHSO noted a reduction in alcohol-related fatalities for motorcyclists, and indicated they have been working hard to discourage alcohol events like "pub crawls."

EFFORTS TO REDUCE MOTORCYCLIST CRASHES AND FATALITIES

The key objectives in protecting motorcyclists are to reduce the major risk factors for crashes and injuries. This is a challenging task. Efforts to achieve these objectives include the following:

Increasing Helmet Use

The most important injury protection mechanism for motorcyclists is to wear a DOT-compliant helmet, which meets specific federal safety standards. **Helmets reduce head and brain injuries and decrease the risk of dying in a crash by 37 percent**[7]. There is no evidence that motorcyclists can be persuaded to wear helmets through educational techniques, but it is well established that helmet use can be increased to more than 90 percent, and in some cases close to 100 percent[8] through a law that requires all motorcyclists to wear helmets (referred to as a universal helmet use law). It is important to note that not all universal helmet laws specify that the helmet must be DOT-compliant. These helmets are safer than non-compliant "novelty" helmets, and this specification makes the helmet law easier to enforce.

Motorcycle helmets decrease the risk of dying in a crash by 37%

Source: NHTSA

In 1967, states were required to have a universal helmet use law in order to qualify for certain highway safety and highway construction funds, and by 1975, all but three states mandated helmets for all motorcyclists. Legislation passed by Congress in 1976 prevented the Department of Transportation from penalizing states financially for not having a helmet use law. Presently, 19 states plus the District of Columbia have universal helmet use laws, 28 require only those younger than a certain age (generally 18 or 21) to use helmets, and three states (Illinois, Iowa, New Hampshire) have no requirements.

7 NHSTA (2008). Traffic safety facts, laws: motorcycle helmet use laws. DOT HS 810 887. Washington D.C.

8 Kraus, J.F., Peek, C., Williams, A. (1992). Compliance with the 1992 California helmet use law. American Journal of Public Health, 85, 96-99.

Some motorcycling organizations and many motorcyclists oppose helmet use laws, arguing that motorcyclists should be able to make their own decisions and that priority should be given to increasing awareness of other motorists to the presence of motorcyclists, and penalizing motorists who cause motorcycle crashes[9]. Numerous bills are introduced every year in state legislatures to repeal or weaken universal helmet use laws or to require universal helmet use. Several states commented on the absence of an effective helmet use law as a detriment to their motorcyclist safety efforts.

Reducing Alcohol-impaired Riding

As illustrated in Figure 4 (p. 8), motorcyclists are the most likely of all fatally injured motor vehicle operators to have BACs of 0.08 percent or greater. Many states cited alcohol as a safety problem for motorcyclists. Clearly, state impairment prevention programs need to address motorcyclists as well as passenger vehicle drivers, and law enforcement officers need to be aware of the cues indicating when motorcyclists may be impaired[10].

Reducing Speeding

Speeding is another important risk factor found more often among motorcyclists than among passenger vehicle drivers. About one-third of motorcyclists in fatal crashes in 2013 were speeding, compared with 21 percent for passenger vehicle drivers[11].

Speeding is particularly problematic among riders of sport and supersport motorcycles. These lightweight, high horsepower bikes have tremendous speed and acceleration capabilities that are likely to encourage speeding and be attractive to those inclined to do so. Washington commented that "overwhelmingly, younger riders choose a 'sport-bike,' a lightweight high-performance, race-replica type motorcycle." Supersport motorcycles have four times the fatal crash rate of other motorcycle types (cruisers or standards), and sport bikes, which are not quite so lightweight or powerful, have twice the fatal crash rate[12].

Reducing Invalid Licensure and Training

Invalid licensure is more common among fatally injured motorcyclists than among fatally injured passenger vehicle drivers. About 25 percent of fatally injured motorcyclists do not have a valid license, compared with 13 percent of fatally injured passenger vehicle drivers[13]. States are aware of this issue and some are trying to address it. One strategy has been to compare motorcycle registration and vehicle licensing files and to contact those who have a registered motorcycle but not a motorcycle license. As noted in last year's GHSA motorcyclist spotlight report, Michigan had some success increasing proper rider endorsements. They used multiple mailings with the visual and narrative threat of having a motorcycle towed if caught without a proper endorsement. Repeated mailings of this type have contributed to steep declines in the unendorsed population of riders in Michigan.

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9 Shinkle, D. (2015). The debate over requiring motorcyclists to wear helmets revs up once again. State Legislatures Magazine, February 2015.

10 Stuster, J. (1993). The detection of DWI Motorcyclists. DOT HS 807 839. Washington D.C: National Highway Traffic Safety Administration.

11 NHTSA (2015). Traffic safety facts: motorcycles, 2013 data. DOT HS 812 148, Washington D.C.

12 Teoh, E., Campbell, M. (2010) Role of motorcycle type in fatal motorcycle crashes. Journal of Safety Research, 41, 507-512.

13 NHTSA (2015). Traffic safety facts: motorcycles, 2013 data. DOT HS 812 148, Washington D.C.

Motorcycle licensing practices vary widely, and it is not clear what the best balance is between policies that are intended to ensure that motorcyclists are well prepared to operate a motorcycle and to interact with other vehicles on the roads, and the problem that some motorcyclists will avoid the licensing process.

Education and training courses are part of the licensing process in many states and should be available to all who wish to take such courses, regardless of requirements. One option is to mandate training in order to receive a motorcycle endorsement, and eliminate leaner permits. Connecticut has mandated rider training prior to receiving a motorcycle endorsement. Operating a motorcycle is more difficult than driving a car, and training courses make sense, although the effects of such courses are unclear[14].

Graduated driver licensing (GDL) policies similar to those for young passenger vehicle drivers have been discussed – and in some cases employed – in the United States, but more so in other countries. These policies are intended to control access to higher risk situations during the learning process. There is logic to easing beginning motorcyclists into full privileges on the roads, but insufficient research evidence to support this idea. NHTSA has recommended a 90-day learner period for beginning motorcyclists, consonant with GDL policy.[15]

Supporting Vehicle Safety Features

One important vehicle factor that can reduce motorcyclist deaths is the antilock brake system (ABS). ABS prevents wheels from locking up, reducing the likelihood of ejection from the motorcycle. In one study, the rate of fatal crashes was 31 percent lower for motorcycles equipped with ABS compared with same-vehicle models without ABS[16]. ABS is becoming increasingly available as standard or as an option on recent model year motorcycles. In a national telephone survey of motorcyclists, 58 percent said they thought ABS enhanced motorcyclist safety, and 54 percent indicated that they would get ABS on their next motorcycle[17]. Thus the percentage of motorcycles on the roads with ABS is likely to rise. The European Union has mandated ABS as standard equipment for motorcycles as of 2016.

Other crash avoidance features for motorcycles are possible, such as traction control, which is being introduced in some motorcycle models. Traction control helps mitigate the loss of traction by correcting rear wheel slip as it starts to occur during acceleration. Bosch markets a system called motorcycle stability control, which optimizes ABS to improve stability in curves. Some manufacturers are exploring ways to adapt other safety advances for passenger vehicles to motorcycles. Airbags are one such feature. A frontal airbag is optional on Honda's Gold Wing touring motorcycle.

Promoting *Share the Road* Programs

The majority of motorcyclist deaths occur in multiple vehicle collisions, although each year more than 40 percent of the deaths occur in single-vehicle crashes, often from contact with fixed objects. In comparison, about half of passenger vehicle fatalities occur in single-vehicle crashes.

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14 Kardamanidis, K., Martiniuk, A., Ivers, R.Q., Stvenson, M.R., Thistlehwaite, K. (2010). Motorcycle rider training for the prevention of road traffic crashes (Review). Cochrane Database of Systematic Reviews. Issue 10, Art. No. CD 005249, Oxfordshire, England: the Cochrane Collaboration.

15 NHTSA (2006). Uniform guidelines for state highway safety programs; motorcycle safety. Washington, D.C.

16 Teoh, E. (2013). Effects of antilock braking systems on motorcycle fatal crash rates – an update. Arlington VA: Insurance institute for Highway Safety.

17 McCartt, A.T., Blaner, L., Teoh, E., Strouse, L. (2011). Overview of motorcycling in the United States: a national survey. Journal of Safety Research, 42, 177-84.

Drivers of other motor vehicles that collide with motorcycles are often at fault in these crashes, violating the motorcyclist's right of way. The most common collision type is when the other motor vehicle is turning left while the motorcyclist is going straight, passing, or overtaking other vehicles. The reason most often offered for these collisions is that motorcycles present a smaller visual target and are not seen by the striking motorists. Motorcyclists are rightfully concerned about incursions into their path.

This is the basis for *Share the Road* programs, which rely on education and publicity to urge motorists to watch out for motorcycles. The programs are primarily aimed at other motorists. Clearly motorcyclists also need to be vigilant, and many motorcyclists learn with experience to anticipate potentially dangerous situations.

Motorcyclists can also make themselves or their bikes more conspicuous through clothing and striping, and some motorcyclists modify their bikes to make them noisier, intending to increase awareness of their presence.

It is certain that motorists should be alert and vigilant when on the roads, but what *Share the Road* programs can accomplish in that regard is questionable. Education/publicity programs used alone, in the absence of an enforcement component, or folded into a broad-based community program, have had little success in changing behavior[18]. Some states do have active enforcement programs. For example, in California increased motorist awareness has been developed through highly publicized motorcycle safety enforcement operations which target violations made by all roadway users that contribute to motorcycle crashes.

Considering Financial Measures

A number of financial methods are available to promote motorcyclist safety, including the following:

- Motorcycle registration fees that are trust-funded and appropriated annually toward motorcycle safety;
- Mandatory sufficient insurance requirements for motorcyclists that are on par with the potential lifetime costs of a traumatic brain injury/head injury; and
- State tax refunds or write-offs for personal protective equipment purchases.

18 NCHRP (2007). Public information and education in the promotion of highway safety. Research Results Digest 322, Washington D.C: Transportation Research Board.

Motorcycle Traffic Fatalities by State

2015 PRELIMINARY DATA

WHAT STATES ARE DOING

SHSOs are committed to improving the safety of all road users by focusing on behavioral issues that lead to traffic crashes such as impaired, distracted, and aggressive driving; seat belt use, child passenger, pedestrian, bicyclists, and motorcyclist safety; and teen and older driver issues. SHSOs are typically tasked with addressing behavioral safety issues via education and enforcement. SHSOs administer federal and state highway safety grants and produce annual state Highway Safety Plans (HSPs) as required by USDOT. In some states, SHSOs are responsible for motorcycle safety programs. SHSO strategies currently underway to reduce motorcyclist fatalities and serious injuries include:

- **Targeted enforcement**
- **Public information campaigns**
- **Safety training**
- **Licensing provisions**

State-specific examples of motorcyclist safety initiatives are described in detail below, as reported in response to the GHSA request for information on their programs. Please note this is not a comprehensive list, but merely an example of activities taking place in many states.

Alabama

In May of 2015, Alabama instituted a requirement mandating that a motorcycle rider or motor-driven cycle rider pass an Alabama Law Enforcement Agency (ALEA) State Trooper-administered written test or pass an approved motorcycle rider class before they can legally ride a motorcycle or motor-driven cycle on Alabama's roads and highways. Successful completion of these items would allow the applicant to qualify for an M Class license. This requirement was put into place to help reduce the number of motorcyclist fatalities in Alabama.

Arkansas

Arkansas conducts a motorist awareness campaign as well as a *Don't Drink and Ride* campaign, targeted toward motorcyclists.

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California

The California Office of Traffic Safety (OTS) provides funding to local law enforcement and the California Highway Patrol to conduct motorcycle safety enforcement operations in which officers target motorcycle riders and other vehicle drivers for violations that can contribute to motorcycle collisions. These motorcycle safety enforcement operations are publicized to raise awareness about motorcycle safety issues.

The California OTS also provides funding to the California Highway Patrol to conduct motorist awareness campaigns, which include paid media for radio and television messages and in-person awareness activities at public events.

The California Highway Patrol oversees the statewide motorcycle rider training program that impacts approximately 60,000 riders each year.

Colorado

The Colorado DOT administers the state-funded Motorcycle Operator Safety Training (MOST) Program to train riders for motorcycle endorsement, educates motorcyclists about the dangers and consequences of impaired riding, and builds partnerships with community coalitions and motorcycle organizations to develop outreach programs that focus on motorcycle safety issues. It also conducts media events in conjunction with partners and stakeholders to promote motorcycle training classes, especially for age groups over-represented by motorcycle crashes and fatalities, and promotes the “Live to Ride” motorist awareness of motorcyclists program.

Connecticut

Connecticut has mandated rider training prior to receiving a motorcycle endorsement. The state currently requires helmet for all riders younger than age 18 and continues to push for a universal helmet law.

Delaware

Delaware uses paid media aimed at both motorcyclists and occupant vehicles. Messaging typically centers on the dangers of excessive speed and the importance of motorists being alert for motorcyclists. Delaware also has strong law enforcement for both motorcyclists and other drivers, with heightened enforcement

during the summer periods, when motorcyclist activity is at its highest. Additionally, Delaware offers rider training programs through the DMV.

District of Columbia

The D.C. Metropolitan Police Department continues to conduct enforcement and distribute safety education materials.

Florida

Each year, Florida conducts a comprehensive motorcyclist safety campaign that focuses on the counties with the most motorcyclist fatalities, as well as events throughout the state, such as the 10-day Daytona Bike Week in March, the 4-day Daytona Biketoberfest in October, and the 3-day Leesburg Bikefest held in April.

Florida has three main media campaigns: *Drink+Ride=Lose, Look Twice Save a Life*, and *Ride Smart.* All three are utilized during the events listed above, as well as in the counties with large numbers of motorcyclist fatalities throughout the year, with increased efforts during the Daytona events. It should be noted that in 2015 and 2016, zero motorcyclist fatalities occurred during the 10-day Daytona Bike Week event.

Florida also utilizes digital message signs to remind motorists to watch for motorcycles and riders to ride responsibly. Additionally, outreach staff attend bike night events and local chapter meetings to educate motorcyclists about the Ride SMART Program (S-Say no to drinking and riding, M-Make yourself more visible to motorists, A-Always wear your helmet when you ride, R-Ride in control, and T-Train regularly and get endorsed).

To further reduce motorcycle crashes, Florida partners with law enforcement agencies. The Osceola Sheriff's Office and Gainesville Police Department provide a Safe Motorcycle and Rider Techniques course to motorcyclists, incorporating exercises utilized in Motor Officer Certification to build relationships with civilian motorcyclists all while improving their riding skills. Additionally, the Florida State University Police Department delivers innovative training for sport bikers at motorcycle racetracks across Florida. This allows experienced instructors to demonstrate and train on the dangers of exceeding the limitations of sport bikes on roadways, and the advantages of moving into a high-performance environment.

Motorcycle Traffic Fatalities by State

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Georgia

Georgia maintains a helmet law and encourages rider training. The state also conducts media buys to encourage motorists to share the road with motorcycles.

Hawaii

Hawaii offers basic rider courses on all the major islands – Hawaii Island, Maui, Kauai and Oahu – which makes training available to most of the state's population. For Motorcycle Safety Month in May, the state runs a PSA reminding drivers to be aware of motorcyclists on the road.

Illinois

Illinois trained more than 16,000 motorcyclists in 2014 and 2015. The state also conducts outreach efforts with the State Police, Department of Motor Vehicles, ABATE and other organizations.

Indiana

Statewide efforts in rider education, motorist awareness, sober riding, and licensing campaigns are ongoing. The Indiana Criminal Justice Institute has recently implemented a High Visibility Enforcement (HVE) project at motorcycle events. It is starting its second year in 2016.

Iowa

Iowa has developed PSA's to educate the public on sharing the road with motorcycles. The Iowa DOT funds a motorcycle safety forum every year.

Kansas

Kansas is currently promoting the *Share the Road* message through outdoor and radio advertisements. This year, NHTSA funding is also providing training for instructors on the new Motorcycle Safety Foundation curriculum.

Kentucky

Kentucky conducts a *Share the Road* campaign as well as a campaign that recommends the use of all motorcyclist safety equipment.

Motorcycle Traffic Fatalities by State

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Louisiana

The Louisiana Highway Safety Commission funds a Motorcycle Awareness Campaign, which conducts an annual motorcycle safety rally and press event in May, during Motorcycle Safety Month. The Louisiana Department of Public Safety conducts a Motorcycle Operator Training Program to instruct motorcycle operators about motorcycle safety.

Maine

In 2016, Maine is increasing its public outreach education for motorcyclists. Efforts include development of several new motorcycle PSA's to combat speeding and impaired riding, and to promote wearing proper safety gear. Maine also plans on having its sports marketing agency take part in some bike rallies to reach the 40-year-old demographic. Maine is also granting money to sponsor riders to take an Experience Rider Training Course designed for riders that have their license, but need a refresher.

Maryland

Maryland is working to coordinate motorcyclist safety efforts with statewide partners as well as educate and raise awareness of motorcyclist safety campaigns by using the four E's of traffic safety (Engineering, Enforcement, Education and EMS). The Motor Vehicle Administration (MVA) Motorcycle Safety Program is a statewide effort that encourages responsible riding, sober riding and the promotion of always using the proper safety gear. Maryland MVA and the Maryland Highway Safety Office also are heavily involved with the Maryland Motorcycle Safety Coalition, which brings together stakeholders, law enforcement and other motorcycle safety professionals to promote motorcycle safety and other issues across the state.

Massachusetts

Massachusetts has a number of efforts underway to support motorcyclist safety training, including: working to improve the motorcycle training curriculum; increasing the number of motorcycle training schools; use of SMART (Safe Motorcyclist Awareness and Recognition Trainer) to reach experienced riders; and working to establish a Rider Education Management System. Massachusetts also plans to introduce a new Motorcycle Awareness Curriculum in driver education, and continues to support the *Share the Road* program and impaired riding campaigns.

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Michigan

Michigan instituted a high-visibility vest project at the beginning of the FY15 season in which every rider who completed and passed a public/state sponsored motorcyclist training program received a high-visibility motorcyclist vest. This project was initiated to make motorcyclists more noticeable to other road users to prevent them from not being seen by other road users and consequently being hit. Almost 7,500 vests were distributed to Michigan motorcyclists in 2015. Michigan is continuing this pilot project for one additional year in FY16.

Minnesota

Minnesota offers a variety of courses and seminars at 29 locations throughout the state, from very basic instruction to advanced rider training. In addition, Minnesota conducts a public information n campaign that promotes helmets and other protective gear use as well as the benefits of rider training. Another sub-campaign encourages motorists to be more aware of motorcyclists, as lack of visibility is still the number one contributing factor cited in state motorcycle crash reports. Finally, the public information campaign also addresses the consequences of riding impaired. For 2016, Minnesota is rolling out new creative for all these themes.

Mississippi

Mississippi provides information to the public and has a strong law enforcement presence in areas with large numbers of motorcycle riders. Mississippi has a helmet law, which helps with the reduction of motorcyclist fatalities.

Missouri

Missouri supports a *Watch for Motorcycles* campaign to increase awareness.

Montana

Montana DOT supports the Montana Motorcycle Riders Safety training offered by Montana State University-Northern, partnering to promote the training and provide media for motorists to watch for motorcyclists. In addition, Montana has assisted with purchasing motorcycles for the training.

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Nebraska

Nebraska conducts motorcyclist awareness campaigns, enforcement campaigns targeting locations with concentration of motorcycle crashes, and promotes both beginning and experienced rider training courses.

New Jersey

In New Jersey, the Motor Vehicle Commission administers the motorcycle safety educational program. This program provides a course of instruction and training designed to develop and instill knowledge, skills, attitudes, and habits necessary for the safe operation of a motorcycle. Beginner and advanced rider training programs are conducted throughout the state. Training is offered at private locations by approved motorcycle safety providers. More than 7,000 riders were trained in 2015.

New Mexico

New Mexico requires all riders under 18 attend motorcyclist training. The state also offers beginner and experienced courses for adults. Training is provided in eight locations around the state. In addition, New Mexico provides statewide media and public awareness.

New York

New York supports a motorist awareness campaign that disseminates information through media and education.

North Carolina

The North Carolina Governor's Highway Safety Program (GHSP) funds rider education for beginner, intermediate, and more advanced riders. In addition to Motorcycle Safety Foundation courses, GHSP also offers rider training and education through BikeSafe NC. This course utilizes motor officers as instructors and evaluators of the civilian students. The course uses both classroom and real-world riding to educate and advise students on improving riding skills.

Motorcycle Traffic Fatalities by State

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North Dakota

North Dakota promotes May as Motorcycle Safety and Awareness Month by integrating a motorcyclist safety message into a traffic safety campaign to reach the general motoring public with the *Watch Out for Motorcyclists, Responsible Driving* and *Share the Road* messages appearing on billboards throughout the state during May.

North Dakota also uses radio PSA's to promote motorcyclist safety at stations across the state. The radio spots are aimed at prime drive times to deliver the *Share the Road* message to drivers. Approximately 81,000 commercial television ads are used to promote motorcycle safety and awareness. *Don't Drink and Ride* commercials run throughout the state from May through September. North Dakota also uses print and social media to promote motorcyclist safety.

Ohio

Ohio DOT is working with riding groups to address concerns related to road surface conditions and intersections in high-risk areas.

Oklahoma

In Oklahoma, state agencies, law enforcement, and public and private entities coordinate to promote motorcycle awareness and provide multiple levels of motorcycle rider training.

Oregon

Oregon DOT (ODOT) continues to use NHTSA Section 405 funds to promote motorcycle awareness through billboards and mass transit media wraps in areas experiencing higher numbers of motorcycle crashes. ODOT is also working closely with law enforcement, rider training programs, rider groups, and the Governor's Advisory Committee to share information and cross promote efforts to improve rider safety and awareness. The ODOT law enforcement program manager paid for a motorcycle speed video in 2015 to directly address the motorcycle speed problem in Oregon: https://www.youtube.com/watch?v=tvkscWBp-Fw.

In 2015, Oregon requested a NHTSA-led Motorcycle Safety Program Assessment. The Assessment provided some very actionable recommendations to improve the program. The team assembled by NHTSA was highly experienced and very motivated

to assist Oregon improve its program. ODOT continues to reach out to riders, rider groups, and businesses that interact with riders to share safety information and solicit feedback on their needs.

Pennsylvania

Pennsylvania conducts a *Share the Road* campaign aimed towards all motorists with a strong "Watch for Motorcycles" message through both paid media and printed materials such as yard signs and bumper stickers.

The state's *Live Free Ride Alive* safety campaign is aimed toward motorcyclists. The campaign uses both paid media and grassroots efforts (such as attendance at rallies, bike nights, and club events) to promote training through a motorcycle safety course and use of proper safety gear, remind motorcyclists not to drink and ride, and share other safety messages.

South Carolina

South Carolina conducts a Motorcycle Safety Campaign each year which focuses on Myrtle Beach Bike Weeks in May and a six-month-long statewide effort (April to September), with emphasis on the counties with the highest number of motorcyclist deaths in the previous year. The campaign features radio and billboard advertising and the use of South Carolina Department of Transportation message signs to alert motorists of the presence of motorcyclists on the roadways. An informational booth is also set up at the Bike Week events to offer safety-related information to bikers and motorists. South Carolina also has established a Motorcycle Safety Task Force made up of a variety of stakeholders, from advocacy groups to state agencies, which studies ways to improve motorcycle safety in the state.

South Dakota

South Dakota conducts educational campaigns for motorcyclists. However, the state is challenged by the fact that the bulk of its motorcyclist safety problems stem from out-of-state bikers who see very few of the in-state campaigns.

Motorcycle Traffic Fatalities by State

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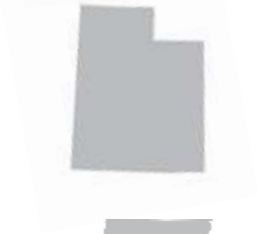
Texas

Texas invests in a paid motorcycle media campaign and motorcycle safety awareness month activities. In addition, the state has more than a dozen events and outreach activities throughout the year to keep this issue in the forefront.



Utah

Utah focuses on proper licensing, training, and working with motorcycle clubs to promote safety.

Vermont

In Vermont, motorcyclists are required to wear a DOT-compliant helmet when operating a motorcycle. Law enforcement officers are trained to identify non-conforming helmets. Additionally, motorcycle training courses are available throughout the state.

Virginia

The Virginia Highway Safety Office utilizes its regional program managers to emphasize the importance of motorcycle safety throughout the state.

Washington State

Washington is expanding its It's *A Fine Line* motorcycle safety program, found online at http://www.itsafineline.com. The state conducted a pilot High Visibility Enforcement motorcycle safety project in King, Pierce, and Snohomish Counties (three of the most populated counties in the state) in summer, 2015. The education, media, and enforcement project will continue in summer, 2016.

Wisconsin

During Motorcycle Safety Awareness Month in May, Wisconsin DOT funds billboards as well as TV and radio PSA's with motorcyclist safety messages

Wisconsin's Transportable High End Rider Education Facility (THE REF) travels throughout the state year-round to bring motorcycle safety awareness and education to the general public and to motorcyclists themselves at motorcycle-focused events. It allows all segments of the population to ask questions, receive awareness and conspicuity education, and use Honda SmarTrainer traffic

simulators. Wisconsin DOT staff also use this time to educate motorcyclists about the wide variety of rider education courses throughout the state.

Wisconsin's broad rider education program follows the Motorcycle Safety Foundation curriculum and offers all levels, from the Introductory Motorcycle Experience (for non-riders to experience the feel of a motorcycle) all the way to the Ultimate Bike Bonding Experience Plus, for the most advanced, experienced riders.

The DOT also developed the Motorcycle Safety Advisory Committee (MoSAC) to provide feedback to the Department regarding many aspects of Department policy and legislation. These safety partners include members of the motorcycle industry, major motorcycle safety advisory groups, a RiderCoach Trainer, members of law enforcement, a road and highways engineer, and anyone else that the Secretary of the Department deems necessary.

Wyoming

Wyoming offers basic and experienced motorcycle rider courses at a reasonable fee to Wyoming residents.

The Motorcycle Safety Program works directly with the Wyoming DOT, Public Affairs Office, to develop and place media via television, radio, newspaper, magazine, and internet to help the public be more aware of motorcyclists as they drive.

The Motorcycle Safety Program emphasizes impaired riding during the four weeks around the Sturgis Motorcycle Rally, distributing posters and other educational items.

The Highway Safety Office also provides grant-funded overtime enforcement to local law enforcement agencies to promote motorcyclist safety and prevent and detect impaired riding.

Motorcycle Traffic Fatalities by State

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DISCUSSION

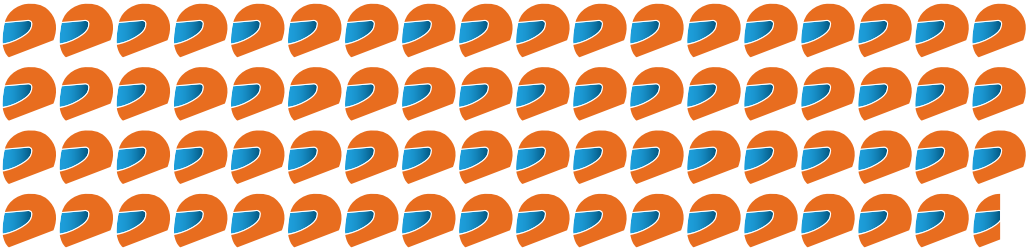
Motorcyclist fatalities in the U.S. are on the rise. The number of motorcyclist fatalities began to rise in 1998 and increased by 151 percent (2,116 to 5,312) through 2008. Since then (2009 - 2014), the annual number of motorcyclist fatalities has averaged 4,644. The present study found an increase of 6 percent in the reported number of motorcyclist fatalities in 2015 compared with 2014. After adjusting for anticipated underreporting in the preliminary state data, GHSA estimates there has been a 10 percent increase in the number of motorcyclist fatalities. GHSA estimates the total number of motorcyclist fatalities for 2015 will be 5,010, compared with 4,548 for 2014. Based on preliminary data alone, more states reported increases (31) than decreases (16), compared with 2014.

Many factors may contribute to year-to-year changes in the number of motorcyclist fatalities, including economic conditions, demographics, weather, fuel prices, and the amount of motor vehicle travel. The highest number of vehicle miles traveled ever reported is arguably an important factor influencing the number of traffic fatalities. Specifically with regard to motorcycle travel, the GHSA survey revealed a clear pattern of states indicating that warmer and drier weather in 2015 led to an extended riding season and increased amounts of motorcycle activity. Males represent more than 90 percent of motorcyclist fatalities.

In Michigan, which saw a 23 percent increase in motorcyclist fatalities, state highway safety officials noted the repeal of Michigan's all rider helmet law in 2012 has contributed to this increase due to fewer riders wearing protective helmets.

Motorcycling remains a risky form of transportation, compared with other modes. One policy that would produce a major decrease in motorcyclist fatalities is the adoption of universal helmet use laws in every state. In 2013, an estimated **1,630 lives were saved in the United States by motorcycle helmets; an estimated 715 additional fatalities could have been prevented if all motorcyclists had worn helmets**[19]. However, the proponents and opponents of universal helmet laws have been locked in a political stalemate in recent years, with few changes to existing laws.

In 2013, if all motorcyclists in fatal crashes had worn helmets, an estimated 715 lives could have been saved.



= 10 Lives Saved

Source: NHTSA

19 NHTSA (2015). Estimating lives and costs saved by motorcycle helmets with updated economic cost information. DOT HS 812 206, Washington, D.C.

A more realistic hope is that there will be an increase in the presence of motorcycles with ABS, which provides lifesaving benefits by preventing a motorcycle's wheels from locking during braking and assisting with maintaining the stability of the motorcycle. There is also the prospect that other effective crash avoidance features becoming increasingly available on both passenger vehicles and motorcycles. Making frontal airbags available on more motorcycle models also would be expected to have beneficial effects, by reducing the severity of injuries resulting from crashes.

CONCLUSION

Motorcyclist fatalities in the United States are expected to have increased by about 10 percent in 2015 compared with 2014, or more than 450 additional fatalities. In light of this projected increase, state efforts to improve motorcyclist safety – as well as the safety of all road users – are critically important. State Highway Safety Office efforts centered on enforcement, education, and training, coupled with roadway engineering improvements and advances in vehicle safety features, will be key to driving down the numbers of motorcyclist crashes, fatalities, and injuries.