

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Prepared for
**Governors Highway
Safety Association**

by **Dr. James Hedlund**
HIGHWAY SAFETY NORTH



Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Summary

The number of motorcyclist traffic fatalities in the United States was about the same in 2011 as in 2010, based on preliminary data supplied by all 50 states and the District of Columbia in February and March 2012.

In the preliminary data, motorcyclist fatalities decreased by 1.7% during the first nine months of 2011. However, experience in 2010 suggests that the final data are unlikely to show a decrease. The 2010 motorcyclist fatality total for the first nine months was 2.0 % greater in the final data than in the preliminary data. A similar increase from the 2011 preliminary to the 2011 final data would result in about the same total motorcyclist fatalities in 2011 as the 4,502 recorded in 2010.

In the 2011 preliminary data, motorcyclist fatalities increased substantially in the first quarter and decreased moderately in the second and third quarters. Through nine months, fatalities decreased in 23 states and increased in 26 states and the District of Columbia, with fatalities unchanged in one state.

States with fewer motorcyclist fatalities attributed the decrease to poor cycling weather, reduced motorcycle registrations and motorcycle travel, increased law enforcement, rider training, and motorcycle safety education. States with more fatalities cited good cycling weather, increased motorcycle registrations and travel, and a return to normal levels after an abnormally low fatality count in 2010.

National data from 1976 to 2012 show that motorcyclist fatalities track motorcycle registrations quite closely and that registrations track inflation-adjusted gasoline prices. The economy is strengthening and gasoline prices are near record highs. That suggests that motorcycle registrations, travel, and fatalities will rise unless active measures are taken.

Motorcycle fatalities also depend on helmet use because helmets, when worn, prevent 37% of motorcycle operator fatal injuries in a crash and 41% of passenger fatal injuries. Helmet use in turn depends on state law. In 2011, use of helmets meeting Department of Transportation safety requirements was 84% in states with laws requiring helmet use by all motorcyclists (universal helmet laws) and 50% in other states.

Unfortunately, only 19 states and the District of Columbia have universal helmet laws. Since 1997, seven states have repealed their universal helmet laws, most recently Michigan on April 12, 2012. Repeal bills have been introduced in five other states in 2012. No state has enacted a universal helmet law since Louisiana reinstated its law in 2004.

The Governors Highway Safety Association recommends that states adopt strategies to increase helmet use, reduce alcohol impairment, reduce speeding, train all motorcycle operators, and encourage other drivers to share the road with motorcyclists. By far the most effective strategy is to enact a universal helmet use law in the 31 states that do not have such a law.

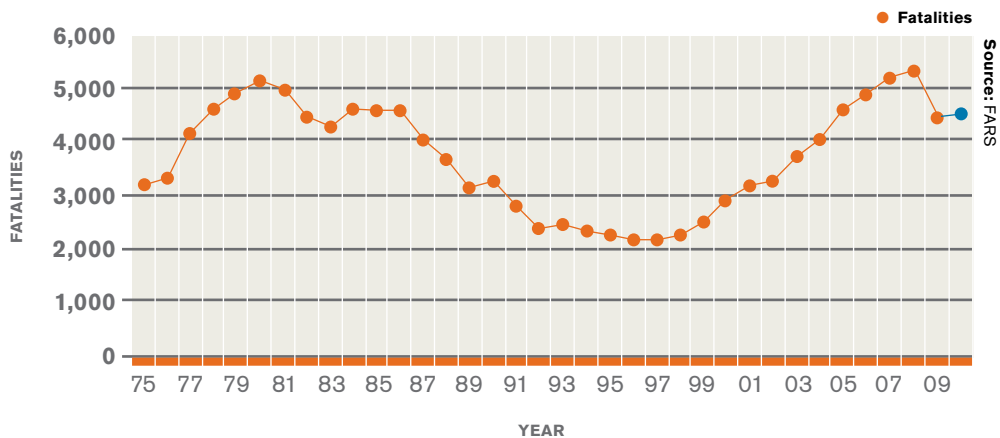
Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Introduction

Motorcyclist traffic fatalities in the United States continue to present challenges. In 2009 the motorcyclist fatality total dropped by 16% to 4,469. This broke a chain of 11 consecutive years of increases that more than doubled motorcyclist fatalities from 2,116 in 1997 to 5,312 in 2008 (Figure 1). But 2009 appears to have been a one-time event. Motorcyclist fatalities increased slightly in 2010 to 4,502, at the same time that passenger vehicle fatalities decreased by 5%. In 2010, 14% of all traffic fatalities were motorcyclists (NHTSA, 2011a).

Figure 1. United States motorcyclist fatalities 1975-2010



In late January 2012, the Governors Highway Safety Association (GHSA) asked each state and the District of Columbia to provide their preliminary motorcyclist fatality counts for 2011, as they did in the previous two years. All 50 states and the District of Columbia supplied data. Many states also presented their views on why their motorcyclist fatalities increased or decreased.

This report summarizes the information received. It should be read with three important considerations in mind.

- 1) All data are preliminary, especially for the last few months of 2011. This report presents data through September because these counts are reasonably complete.
- 2) All data are reported by the states from their traffic record systems. Their motorcyclist fatality counts may differ slightly from the counts recorded in the Fatality Analysis Reporting System (FARS) of the National Highway Traffic Safety Administration (NHTSA).
- 3) The states' views on possible reasons for increases or decreases are based on their experience and best judgment, not on any scientific analyses.

Throughout this report, a motorcyclist is any person operating or riding as a passenger on a motorcycle, motor scooter, or other two-wheeled motorized vehicle.

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Motorcyclist fatalities in 2010 and 2011

Table 1 compares the 2010 and 2011 motorcyclist fatality counts in three-month intervals through September 2011. (California did not report data after July, so the July-September and nine-month counts exclude August and September for California.) See Table 3 on page 15 for the complete data by state.

Many states have relatively little motorcycle travel in the winter months due to snow, ice, rain, and cold weather. In 2010, for the nation as a whole, only 10% of motorcyclist fatalities occurred in January through March and 17% in October through December. Almost three-quarters occurred during the other six months: 35% in April through June, and 38% in July through September..

Table 1. Motorcyclist fatalities by quarter, 2010 and 2011, preliminary data

	Jan - Mar	Apr - June	Jul - Sept	Nine Month Total Jan - Sept
2010 final	467	1,544	1,630	3,641
2011 preliminary	533	1,441	1,606	3,580
change from 2010	66	- 103	- 24	- 61
percent change	+ 14.1 %	- 6.7 %	- 1.5 %	- 1.7 %
States with decrease	16	29	23	23
States unchanged	12	4	3	1
States with increase	23	18	25	27
States reporting*	51	51	51**	51**

Data reported to GHSA by the states and the District of Columbia in February and March 2012; some 2011 data preliminary

* includes the District of Columbia

** California only through July

In the first quarter of 2011, motorcyclist fatalities decreased in 16 states, increased in 22 states and the District of Columbia, and were unchanged in 12. Most changes were small: only three of the increases, and none of the decreases, were by 10 or more fatalities.

The second quarter produced substantially more motorcyclist fatalities as the riding season began in earnest. The first quarter's pattern shifted substantially, with decreases compared to 2010 in 29 states and increases in 18. Ten of the decreases and only 3 of the increases were by 10 or more fatalities. For the six months through June, fatalities dropped by 37, or 1.8% (Table 3).

Motorcyclist fatalities in the third quarter were relatively unchanged from 2010. About half the states reported increases and about half reported decreases. Seven of the decreases and seven of the increases were by 10 or more fatalities. Overall, fatalities decreased by 24, or 1.5%.

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Motorcyclist fatalities in 2010 and 2011

In the nine months through September, fatalities decreased by 61, or 1.7%, with slightly more states reporting increases than decreases.

The final 2010 motorcyclist fatality total for the first nine months was 2% greater than the preliminary total for these months reported by the states last year. If the final 2011 motorcyclist fatality total also is about 2% greater than the preliminary total reported here (Tables 1 and 3), that will counteract the 1.7% decrease reported for the first nine months, so that the final fatalities for 2011 will be approximately the same as the 4,502 recorded in 2010.

Table 2 compares the 2011 quarterly changes in motorcyclist fatalities with the quarterly changes in overall traffic fatalities estimated by NHTSA (2012a). For the nine months through September, both total fatalities and motorcycle fatalities are estimated to have decreased slightly. For the full year, NHTSA estimates that total traffic fatalities decreased about 1.7%. Motorcycle fatalities probably did not decrease this much and may even have increased slightly.

Table 2. Estimated traffic fatality change by quarter, 2010 and 2011, preliminary data for 2011

	Jan – Mar	Apr – Jun	Jul – Sept	9 Month Jan – Sept	Oct – Dec	Full year
motorcyclist fatalities	+ 14.1 %	- 6.7 %	+ 1.5 %	- 1.7 %		
total traffic fatalities	- 0.1 %	- 3.2 %	- 2.5 %	- 1.6 %	- 0.7 %	- 1.7 %

Motorcyclists: data reported to GHSA by the states and the District of Columbia in February and March 2012; some data preliminary
Total: NHTSA (2012a)

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Reasons for changes in motorcyclist fatalities

Much motorcycle travel is discretionary. It's affected by weather conditions: cold and wet weather discourages motorcycling while warm and dry weather encourages it. Both states with increases and states with decreases in motorcyclist fatalities in 2011 pointed to weather as one potential explanation.

Increases:

- **Illinois:** *"increase in fatalities in 2011 may be attributed to, among other things, good weather"*
- **Virginia:** *"good weather conditions which resulted in a longer riding season"*

Decreases:

- **Michigan:** *"the riding weather was worse in 2011"*
- **Ohio:** *"rainy weather in the spring of 2011 played a part"*
- **Oregon:** *"a very wet spring; consequently the riding season was delayed"*
- **Wisconsin:** *"the 'less conducive to riding' weather in 2011 versus the somewhat better weather in 2010 in all likelihood played a role"*

Many states have few motorcyclist fatalities. In 2010, there were fewer than 100 in 36 states and the District of Columbia. When a motorcycle crashes, as Maryland noted, "the difference between a [non-fatal] crash and a fatality can be very slight." So random variation can play a role in a state's year-to-year experience, with a decrease in 2011 following an increase in 2010 or vice versa.

- **California:** *"after experiencing a 37% decrease in motorcycle fatalities from 2008 to 2010, this potential 10% increase in 2011 could be attributed to a stabilization"*
- **Delaware:** *"[fatalities] doubled last year [to 18 for the full year]. In 2005 there were 21 motorcycle rider fatalities, followed by 12 in 2006 ..."*
- **Maryland:** *"we are back to where we were in 2004 prior to the bike boom"*
- **Utah:** *"increase of 6 motorcycle fatalities during 2011 is still lower than the average from the past few years. It's difficult to find conclusive trends when dealing with such small numbers"*

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Reasons for changes in motorcyclist fatalities

Several states suggested that specific motorcycle safety programs may have played a role in decreasing or limiting the increase in motorcyclist fatalities. These programs include:

- **Enforcement:** noted by California, New Hampshire, New York, and Tennessee
- **Education and publicity:** noted by California, Michigan, Missouri, New York, Pennsylvania, and Wisconsin
- **Training:** noted by Colorado, Michigan, New Hampshire, North Carolina, Ohio, Pennsylvania, and Wisconsin

Loopholes in state laws affecting motorcyclists can increase motorcyclists' risk. Indiana observed a dramatic increase in moped fatalities and noted that moped operators in Indiana do not need to have a valid driver's license or to register their mopeds. South Carolina has no training requirement for a motorcycle learner's permit. Riders with a learner's permit can operate a motorcycle indefinitely without taking the road test required for a permanent motorcycle endorsement.

Finally, but critically important, motorcyclist fatalities depend on the amount of motorcycle travel, as noted by many states. Unfortunately, accurate state-level motorcycle travel data are not available. Travel depends in part on motorcycle registrations and motorcycle operator licenses or endorsements. Several states observed that motorcycle registration or endorsement increases or decreases probably affected fatalities.

- **Alaska:** *"the increase in motorcycle registrations coincides with the increase in motorcycle fatalities"*
- **Arkansas:** *"drop in motorcycle registrations"*
- **California:** *"motorcycle registrations in California peaked in 2008"*
- **Connecticut:** *"motorcycle registrations continue to decrease"*
- **Florida:** *"increases in motorcycle endorsements"*
- **Indiana:** *"motorcycle registrations increased from 2010 to 2011"*
- **Nebraska:** *"dramatic increase in registered motorcycles and motorcycle operator endorsements"*
- **New Mexico:** *"motorcycle registration numbers continue to increase"*
- **Texas:** *"motorcycle registrations increased from 2010 to 2011"*
- **Wisconsin:** *"new motorcycle registrations decreased by 12%"*

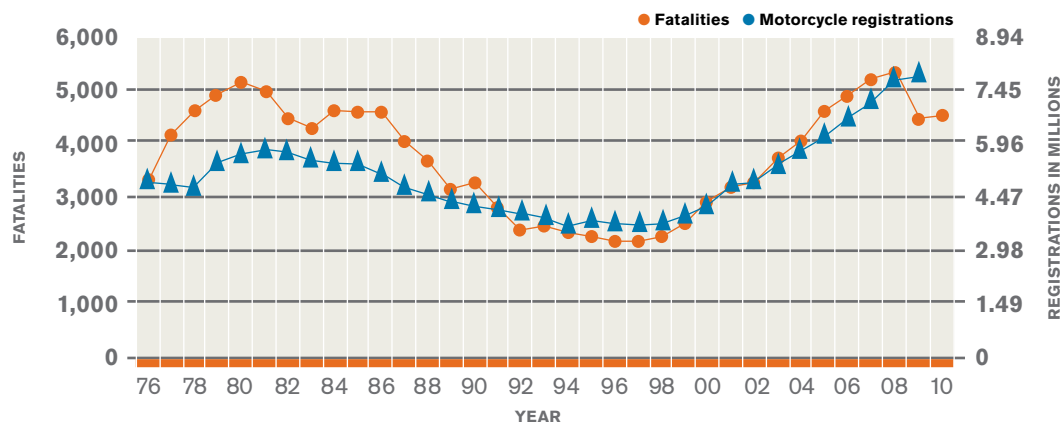
Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Reasons for changes in motorcyclist fatalities

National data support a strong relation between motorcycle registrations and motorcyclist fatalities. Figure 2 plots the trends from 1976 to 2010 for fatalities and 2009 for registrations (registration data for 2010 were not available in April 2012). Registration counts are adjusted to the same 1976 total as fatalities, so the trends can be compared easily. Fatalities track registrations quite closely for the entire 34 years and extremely closely for the period 1990-2008.

Figure 2. Motorcycle registrations and motorcyclist fatalities, 1976-2010



Sources: fatalities – FARS; registrations – FHWA Highway Statistics
Registrations adjusted to 1976 = 3,312

The economy influences motorcycle travel strongly, perhaps in various ways. A poor economy reduces discretionary income which in turn may reduce the sale and use of motorcycles for recreational purposes. On the other hand, higher gasoline prices may encourage riders to substitute fuel-efficient motorcycles for automobiles in trips to and from work and other everyday travel. Several states noted these possibilities.

- **Arizona:** “some may say that [the increase in motorcycle fatalities] is tied somewhat to the cost of fuel”
- **Arkansas:** “the economy – a large number of motorcycle dealers closed, sales were down ... with the economy people are not traveling as far”
- **California:** “it is possible that the depressed economy reduced the number of miles that these motorcycles were being ridden”
- **Michigan:** “one could argue that ... a continued low growth economy played a role”
- **Missouri:** “the economic downturn may have kept many motorcyclists off the road in 2011”
- **New Hampshire:** “the economy is a factor in terms of fewer new motorcycles being purchased and less mileage as well”

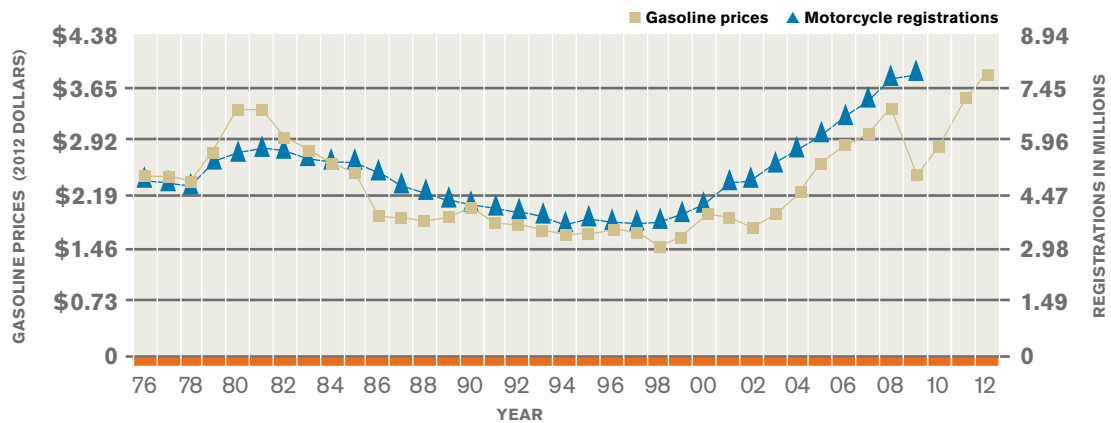
Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Reasons for changes in motorcyclist fatalities

Again, national data suggest a relation between gasoline prices and motorcycle registrations. Figure 3 plots gasoline prices (annual U.S. city average, unleaded regular, adjusted for inflation) and registration trends from 1976 to 2012 for gasoline prices and 2009 for registrations. Both are adjusted to the same 1976 total as fatalities. Registrations track inflation-adjusted gasoline prices reasonably closely with the exception of 2009.

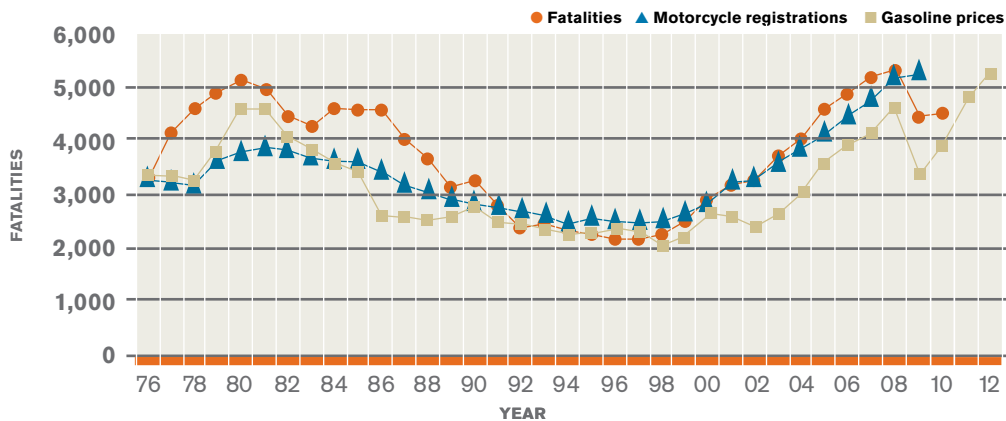
Figure 3. Gasoline prices and motorcycle registrations, 1976-2012



Sources: registrations – FHWA Highway Statistics, gasoline prices – Bureau of Labor Statistics
Registrations and gasoline prices adjusted to 1976 = 3,312

Figure 4 plots the three trends together.

Figure 4. Gasoline prices, motorcycle registrations, and motorcyclist fatalities 1976-2012



Sources: FARS, registrations – FHWA Highway Statistics, gasoline prices – Bureau of Labor Statistics
Registrations and gasoline prices adjusted to 1976 = 3,312

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Discussion

The nine-month preliminary data reported by all 50 states and the District of Columbia leave no doubt that total motorcyclist fatalities in 2011 were about the same as in 2010. What can be expected for 2012? The economy continues to recover and the stock market indices posted their best first quarter in several years (Nazereth, 2012). At the same time, gasoline prices remain high, with the Energy Information Administration forecasting regular gasoline retail prices to average \$3.71 per gallon in 2012 and \$3.67 per gallon in 2013, compared with \$3.53 per gallon in 2011 (EIA, 2012). Political uncertainties in the Middle East may lead to reduced supplies and higher prices at the pump.

If these two trends continue they likely will increase motorcycle travel and motorcyclist fatalities unless strong measures are taken. An improved economy will mean more disposable income, more motorcycle sales and registrations, more recreational motorcycle travel, and more motorcyclist fatalities (Figure 2). Higher gasoline prices may shift more non-recreational travel to motorcycles, again increasing motorcycle fatalities (Figure 3).

The effective strategies to prevent motorcyclist crashes, injuries, and fatalities are well-known. Many states have made motorcycle safety a high priority. Beyond this, GHSA recommends that states address five major areas.

Increase helmet use.

Helmets are by far the single most effective method to prevent motorcyclist fatalities and serious injuries. Helmets are 37% effective in preventing fatal injuries to motorcycle riders (operators) and 41% effective for passengers (NHTSA, 2011a). In 2008, 43% of fatally-injured motorcyclists were not wearing helmets. That rose to 44% in 2009. NHTSA estimates that helmets saved 1,829 motorcyclists' lives in 2008 and that 822 of the unhelmeted motorcyclists who died would have survived if they had worn helmets (NHTSA, 2009).

More than 30 years of experience demonstrate conclusively that state motorcycle helmet use laws are the best way to increase helmet use. In 2011, use of helmets meeting Department of Transportation safety requirements was 84% in states with laws requiring helmet use by all motorcyclists (universal helmet laws) and 50% in other states (NHTSA, 2012c).

A universal helmet law is the only motorcycle safety strategy whose effectiveness is rated as five-star ("demonstrated to be effective by several high-quality evaluations with consistent results") in Countermeasures That Work (CMTW), NHTSA's guide for states (NHTSA, 2011b, Section 5). Similarly, increasing the use of helmets is the only motorcycle safety strategy rated as proven ("used in one or more locations, and for which properly designed evaluations have been conducted that show it to be effective") in the American Association of State Highway and Transportation Officials (AASHTO) "Guide for Addressing Collisions Involving Motorcycles" (Potts et al., 2008, Strategy 11.1E1) and the only strategy rated "scientifically proven" in the Center for Disease Control and Prevention's "Motorcycle Safety" (CDC, 2011).

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Discussion

Unfortunately, only 19 states and the District of Columbia have universal helmet laws (GHSA, 2012a). Since 1997, seven states have repealed their universal helmet laws: Arkansas and Texas in 1997, Kentucky in 1998, Louisiana in 1999, Florida in 2000, Pennsylvania in 2003, and most recently Michigan on April 12, 2012. Repeal bills have been introduced in five other states in 2012. No state has enacted a universal helmet law since Louisiana reinstated its universal helmet law in 2004 (IIHS, 2012).

When a universal helmet law is repealed, helmet use drops substantially. After their laws were repealed, motorcyclist fatalities increased by 21% in Arkansas, 81% in Florida, 58% in Kentucky, 108% in Louisiana, and 31% in Texas (NHTSA, 2008; Preusser, et al., 2000; Ulmer and Preusser, 2003; Ulmer and Nothrup, 2005). The most recent evaluation found that Pennsylvania's 2003 universal helmet law repeal decreased motorcycle helmet use among riders in crashes from 82% to 58%, increased the death rate from head injuries by 66%, and increased the number of riders hospitalized for head injuries by 43% (Mertz and Weiss, 2008). When Louisiana reinstated its universal helmet law in 2004, helmet use increased from about 50% to nearly 100% and there was a significant drop in fatal and severe motorcyclist injuries (Gilbert et al., 2008).

Enacting universal helmet laws in the 31 states that lack them is the quickest and most effective method to increase helmet use and reduce motorcyclist head injuries and fatalities.

Reduce alcohol impairment.

In 2010, 29% of fatally injured motorcycle riders had a blood alcohol concentration above the legal limit of .08 (NHTSA, 2011a). States should include motorcyclists in their impaired driving program activities. For example, CMTW recommends highly publicized enforcement, using officers trained in identifying impaired motorcyclists as well as other vehicle drivers, combined with offender sanctions including vehicle impoundment or forfeiture (NHTSA, 2011b, Strategy 5.2.1). AASHTO recommends a combination of education, prevention, and enforcement programs (Potts et al., 2008, Strategies 11.1B1-3).

Reduce speeding.

In 2008, 35% of motorcycle riders involved in fatal crashes were speeding, compared to 23% for passenger car drivers and 19% for light truck drivers (NHTSA, 2009). Almost half of all motorcycle fatal crashes did not involve another vehicle and speeding likely contributed to many of these. Speeding by motorcyclists can be reduced by many of the strategies that reduce speeding by other drivers. Active and well-publicized enforcement is key and can be targeted to high crash locations and to high-risk areas such as school and work zones. Aggressive driving behavior by motorcyclists often involves speeding. Aggressive driving enforcement enjoys strong public support (GHSA, 2012b).

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Discussion

Provide motorcycle operator training to all who need or seek it.

All beginning riders should be trained in basic motorcycle operating skills and safe riding practices. Refresher training can be useful for many riders who are returning to motorcycling after not riding for several years. All states currently conduct operator training courses, but they may not provide enough course openings at places and times when riders can attend. Both CMTW (NHTSA, 2011b, Strategy 5.3.2) and AASHTO (Potts et al., 2008 Strategies 11.1C1-3) endorse rider training.

Encourage all drivers to share the road with motorcyclists.

When motorcycles crash with other vehicles, the other vehicle driver usually violates the motorcyclist's right-of-way (NHTSA, 2011b). Motorcycles and motorcyclists are smaller visual targets than cars or trucks and drivers may not expect to see motorcycles on the road. Many states have conducted communications and outreach campaigns to increase other drivers' awareness of motorcyclists. Typical themes are "Share the Road" or "Watch for Motorcyclists." NHTSA provides marketing materials to promote sharing the road with motorcyclists and has designated May as Motorcycle Safety Awareness Month (NHTSA, 2012b).

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

References

CDC (2011). *Motorcycle Safety: How to Save Lives and Save Money*. Atlanta, GA: National Center for Injury Prevention and Control. <http://www.cdc.gov/Motorvehiclesafety/mc/index.html>

EIA (2012). *Short Term Energy Outlook*, May 8, 2012. Washington, DC: U.S. Energy Information Administration. <http://www.eia.gov/forecasts/steo/>

GHSA (2012a). *Helmet Laws*, April 2012. Washington, DC: Governors Highway Safety Association. <http://www.statehighwaysafety.org/>

GHSA (2012b). *Survey of the States: Speeding and Aggressive Driving*. Washington, DC: Governors Highway Safety Association. <http://www.statehighwaysafety.org/>

Gilbert, H., Chaurdary, N., Solomon, M., Preusser, D., and Cosgrove, L. (2008). *Evaluation of the Reinstatement of the Helmet Law in Louisiana*. DOT HS 810 956. Washington, DC: National Highway Traffic Safety Administration. <http://www.nhtsa.gov/Safety/Motorcycles>.

IIHS (2012). Personal communication. Arlington, VA: Insurance Institute for Highway Safety.

Mertz, K.J. and Weiss, H.B. (2008). Changes in motorcycle-related head injury deaths, hospitalizations, and hospital charges following repeal of Pennsylvania's mandatory motorcycle helmet law. *American Journal of Public Health* 98(8), p. 1464-1467.

Nazereth, R. (2012). "U.S. stocks rose, extending the biggest first-quarter advance since 1998 for the Standard & Poor's 500 Index." *Washington Post* March 31, 2012. <http://washpost.bloomberg.com/Story?docId=1376-M1OU6107SXKX01-4N4HIBVOU62AQFV1S4B94QBL19>

NHTSA (2008). *Traffic Safety Facts: Motorcycle Helmet Use Laws*. DOT HS 810 877W. Washington, DC: National Highway Traffic Safety Administration.

NHTSA (2009). *Traffic Safety Facts, 2008 Data: Motorcycles*. DOT HS 811 159. Washington, DC: National Highway Traffic Safety Administration. <http://www-nrd.nhtsa.dot.gov/Pubs/811159.pdf>

NHTSA (2011a). *Traffic Safety Facts, 2010 Motor Vehicle Crashes: Overview*. DOT HS 811 552. Washington, DC: National Highway Traffic Safety Administration. <http://www-nrd.nhtsa.dot.gov/Pubs/811552.pdf>

NHTSA (2011b). *Countermeasures That Work: A Highway Safety Countermeasures Guide for State Highway Safety Offices*. Sixth Edition, 2011. DOT HS 811 444. Washington, DC: National Highway Traffic Safety Administration. <http://www.nhtsa.gov/staticfiles/nti/pdf/811444.pdf>

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

References

NHTSA (2012a). *Traffic Safety Facts, Early Estimate of Motor Vehicle Traffic Fatalities in 2011*. DOT HS 811 604. Washington, DC: National Highway Traffic Safety Administration. <http://www-nrd.nhtsa.dot.gov/Pubs/811604.pdf>

NHTSA (2012b). *Share the Road Marketing Materials*. Washington, DC: National Highway Traffic Safety Administration. <http://www.trafficsafetymarketing.gov/CAMPAIGNS/Motorcycle+Safety/Share+The+Road>

NHTSA (2012c). *Motorcycle Helmet Use in 2011 – Overall Results*. DOT HS 811 610. Washington, DC: National Highway Traffic Safety Administration. <http://www-nrd.nhtsa.dot.gov/Pubs/811610.pdf>

Potts, I., Garets, S., Smith, T., et al. (2008). *Guidance for Implementation of the AASHTO Strategic Highway Safety Plan. A Guide for Addressing Collisions Involving Motorcycles*. NCHRP Report 500, Vol. 22. Washington, DC: Transportation Research Board. http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v22.pdf

Preusser, D.F., Hedlund, J.H, and Ulmer, R.G. (2000). *Evaluation of Motorcycle Helmet Law Repeal in Arkansas and Texas*. DOT HS 809 131. Washington, DC: National Highway Traffic Safety Administration. <http://www.nhtsa.gov/Safety/Motorcycles>

Ulmer, R.G. and Northrup, V.S. (2005). *Evaluation of the Repeal of the All-Rider Motorcycle Helmet Law in Florida*. DOT HS 809 849. Washington, DC: National Highway Traffic Safety Administration. <http://www.nhtsa.gov/Safety/Motorcycles>

Ulmer, R.G. and Preusser, D.F. (2003). *Evaluation of the Repeal of Motorcycle Helmet Laws in Kentucky and Louisiana*. DOT HS 809 530. Washington, DC: National Highway Traffic Safety Administration. <http://www.nhtsa.gov/Safety/Motorcycles>

Motorcyclist Traffic Fatalities by State

2011 PRELIMINARY DATA

Table 3
Motorcyclist fatalities, January – June and January – September 2010 and 2011

Data reported to GHSA by all 50 states, the District of Columbia, Puerto Rico, and Guam in February and March 2012; some data preliminary.

*California reported monthly data for January through July. California's August and September fatalities are not included in the 9-month comparisons.

Puerto Rico's motorcycle fatalities dropped from 36 in the first nine months of 2010 to 31 in 2011.

Guam reported 2 motorcycle fatalities in the first nine months of both 2010 and 2011.

State	2010 6 months	2011 6 months	Change from 2010	2010 9 months	2011 9 months	Change from 2010
AK	5	3	-2	9	10	1
AL	39	47	8	73	76	3
AR	39	26	-13	75	48	-27
AZ	51	62	11	70	96	26
CA	168	179	11	202	223	21
CO	30	35	5	71	74	3
CT	27	17	-10	49	31	-18
DC	1	2	1	1	3	2
DE	4	12	8	6	16	10
FL	205	215	10	292	303	11
GA	48	65	17	99	108	9
HI	18	13	-5	21	27	6
IA	30	11	-19	54	32	-22
ID	8	4	-4	25	13	-12
IL	43	46	3	110	126	16
IN	48	40	-8	96	101	5
KS	17	21	4	36	40	4
KY	37	28	-9	80	64	-16
LA	37	39	2	53	53	0
MA	22	9	-13	54	26	-28
MD	34	31	-3	65	52	-13
ME	6	5	-1	15	16	1
MI	44	41	-3	112	99	-13
MN	17	13	-4	39	42	3
MO	41	26	-15	76	68	-8
MS	20	30	10	33	48	15
MT	9	4	-5	22	19	-3
NC	81	68	-13	147	116	-31
ND	6	2	-4	13	12	-1
NE	5	7	2	12	22	10
NH	16	5	-11	26	12	-14
NJ	32	49	17	60	79	19
NM	17	22	5	33	38	5
NV	16	22	6	34	35	1
NY	88	67	-21	163	137	-26
OH	77	66	-11	151	145	-6
OK	37	46	9	62	72	10
OR	18	19	1	35	34	-1
PA	86	85	-1	197	171	-26
RI	8	5	-3	13	14	1
SC	51	58	7	81	102	21
SD	5	1	-4	26	14	-12
TN	71	58	-13	117	102	-15
TX	205	243	38	323	374	51
UT	8	10	2	20	26	6
VA	40	34	-6	63	72	9
VT	2	4	2	3	8	5
WA	30	28	-2	66	64	-2
WI	46	32	-14	99	77	-22
WV	8	15	7	29	25	-4
WY	10	4	-6	30	15	-15
TOTAL	2,011	1,974	-37	3,641	3,580	-61