

Spotlight on  
Highway Safety

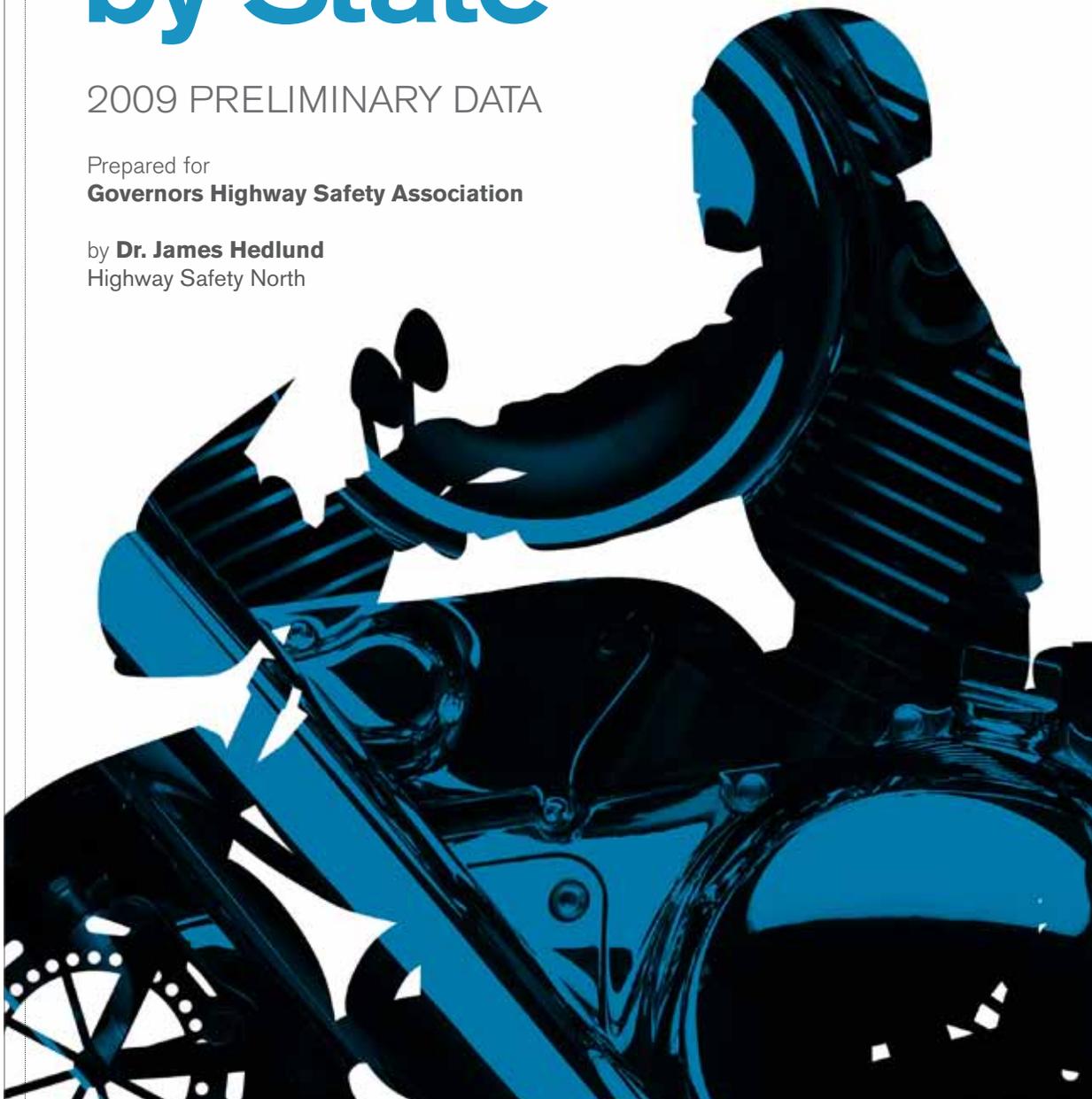


# Motorcyclist Traffic Fatalities by State

2009 PRELIMINARY DATA

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## Summary

Motorcyclist traffic fatalities in the United States fell in 2009, based on preliminary data supplied by all 50 states and the District of Columbia. This is the first year since 1997 that motorcyclist fatalities decreased.

Motorcyclist fatalities dropped by 16% during the first nine months of 2009 across the 39 states that reported monthly data. Most states have quite complete traffic fatality counts for this period.

**While fatality data for the final months of 2009 are less complete, the decrease for the full year nationwide is expected to be at least 10%. If there is a 10% decrease, then motorcyclist fatalities dropped from 5,290 in 2008 to no more than 4,762 in 2009.**

For the full year, about three-quarters of the states are expected to have fewer motorcycle fatalities than in 2008.

States suggested several reasons for their motorcyclist fatality decreases: less motorcycle travel due to the economy, fewer beginning motorcyclists, increased attention to motorcycle safety programs in the states, and poor cycling weather in some states.

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## Introduction

As states began examining their preliminary traffic fatality data for 2009, some states noted that motorcyclist fatalities had dropped after several years of increases. To investigate further, in late January 2010 the Governors Highway Safety Association (GHSA) asked each state and the District of Columbia to provide their preliminary motorcyclist fatality counts for 2009.

All 50 states and the District of Columbia provided data. Thirty-nine states provided monthly counts for both 2009 and 2008, while the remaining 11 states and the District of Columbia provided annual totals. States also were asked for 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 and some 2009 counts are incomplete. Two states did not report any December data. Counts for the last two or three months in other states likely are incomplete. On the other hand, some states estimate that their motorcycle traffic fatality counts for the year are quite complete. This analysis compares data for three-month periods to allow for potential under-reporting in the later months.
- 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) even for 2008, for which all data files are complete and closed.
- 3) The states' views on the reasons for increases or decreases are based on the states' experience and best judgment, not on any scientific analyses.

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

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## Motorcyclist fatalities in 2008 and 2009

For the full year of 2009, 38 states and the District of Columbia reported a drop in motorcyclist fatalities from 2008 and 12 states reported an increase. About half the state counts for 2009 are reported to be final or very close to final. The rest are preliminary to varying degrees, with some final except for December and others incomplete for two or three months. Judging from each state's reported totals and completeness, it is expected that the final data will confirm a decrease for almost all the states currently reporting one. This means that motorcyclist fatalities will have decreased in about three-quarters of the states.

Most state counts are complete or nearly complete through nine months. Table 1 shows how the 2008 and 2009 motorcyclist fatality counts compare in three-month intervals for the 39 states that reported monthly data.

**Table 1** Motorcyclist fatalities by quarter, 2008 and 2009, data from 39 states

	Jan - Mar	Jan - June	Jan - Sept
2008 total	425	1801	3421
2009 total	443	1626	2887
change from 2008	+ 18	- 175	- 534
percent change	+ 4 %	- 10 %	- 16 %
States with decrease	11	22	29
States with increase	21	16	9
States unchanged	7	1	1

DATA REPORTED TO GHSA BY 39 STATES IN JANUARY AND FEBRUARY 2010; SOME DATA PRELIMINARY

Many states have relatively little motorcycle travel through March due to snow, ice, rain, and cold weather. In 2008, for the nation as a whole, only 8% of motorcyclist fatalities occurred during these months. Another 26% occurred in April through June, 31% in July through September, and 35% in October through December.

In the first quarter of 2009, January through March, motorcyclist fatalities increased in 21 of the 39 states that reported monthly data and decreased in 11. Most changes, either increases or decreases, were very small: 26 of the 39 states reporting monthly data had fewer than 10 motorcyclist fatalities in this quarter. For the 39 states as a whole, fatalities increased by 18, or 4%.

In contrast, fatalities decreased in 22 of the 39 states during the first six months of 2009. Many decreases were substantial; in aggregate, fatalities across the 39 states

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dropped by 175, or 10%. This is similar to the 9% drop in overall traffic fatalities NHTSA estimated for this period (NHTSA, 2010a). Data from this period are quite complete. The final data are expected to confirm that motorcyclist fatalities dropped about 10% during the first half of the year.

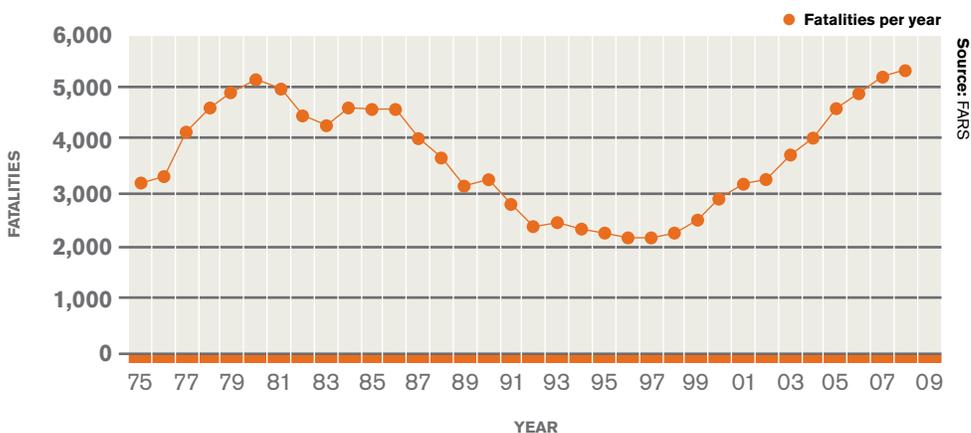
For the nine months through September of 2009, the reported drop was even greater: decreases in 29 states and aggregate fatalities down by 534, or 16%, compared to 2008. A few fatal crashes from these months probably have not yet been reported. These will add to the 2009 total and reduce the difference from 2008 to some extent. While there is no way to estimate this under-reporting, many states are quite confident of their 2009 data through September. The final data are expected to show a decrease in motorcyclist fatalities of 10-15% for these nine months.

Data from the final quarter are not presented because some states' 2009 counts for this period are known to be under-reported. However, the preliminary data suggest nothing to change the conclusion from the nine-month results. The final 2009 data are expected to show that motorcyclist fatalities were 10-15% below the 2008 total of 5,290. This decrease would be greater than NHTSA's 8.9% estimated decrease in total traffic fatalities in 2009 (NHTSA, 2010a). About three-quarters of the states are expected to show decreases from 2008.

## Motorcyclist fatality trends

As Figure 1 shows, United States motorcyclist fatalities have increased every year since 1997. The 2008 total of 5,290 was the highest ever recorded.

**Figure 1 United States motorcyclist fatalities 1975-2008**



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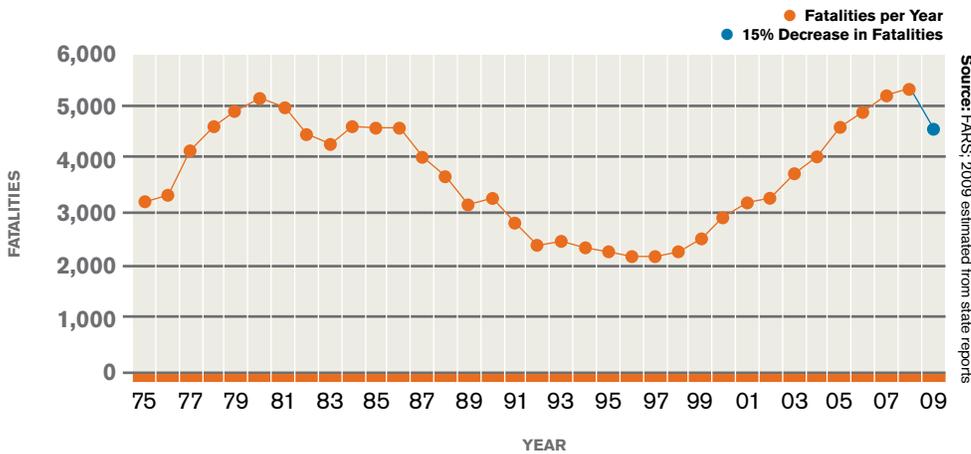
The expected 10-15% decrease in 2009 marks an abrupt change in this 11-year trend. Figure 2 illustrates this if the 2009 decrease is 10%.

**Figure 2 United States motorcyclist fatalities 1975-2009, with 10% decrease in 2009**



If the 2009 decrease is 15%, Figure 3 shows that the change is even more startling.

**Figure 3 United States motorcyclist fatalities 1975-2009, with 15% decrease in 2009**



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Another way to illustrate these motorcyclist fatality trends is to examine the annual increase or decrease. Figure 4 shows this for 12 years through 2008. The Figure starts with 1997, the last year in which motorcyclist fatalities decreased.

**Figure 4 Annual change in United States motorcyclist fatalities 1997-2008**

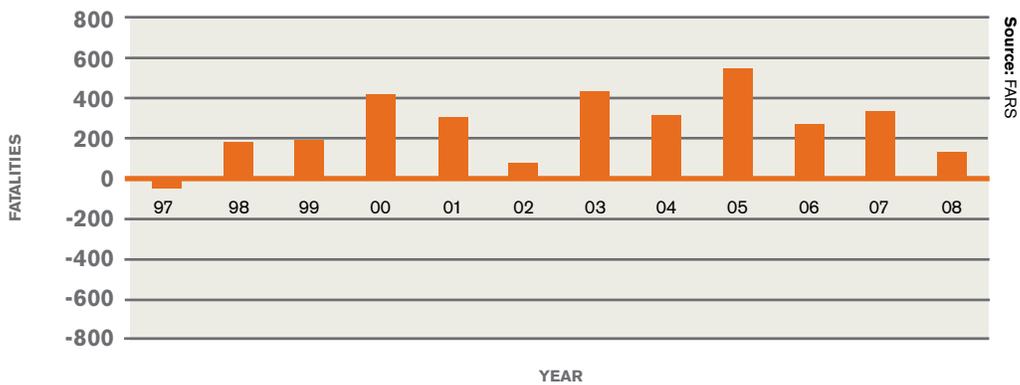
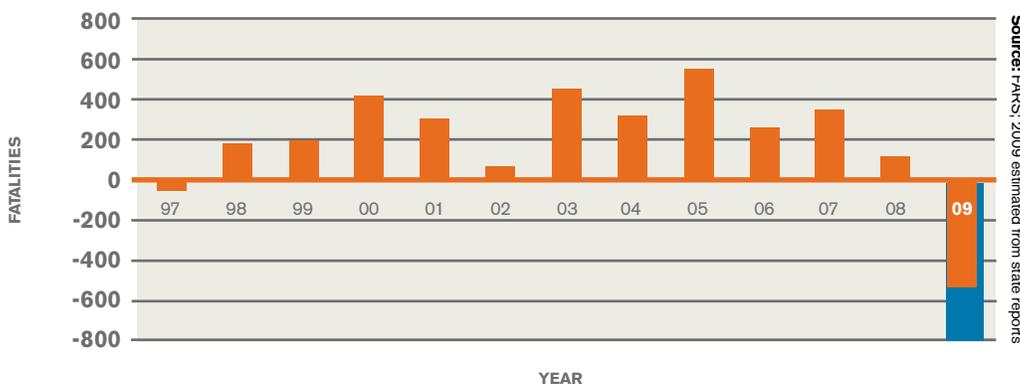


Figure 5 shows how a 10% or a 15% decrease in 2009 changes this pattern.

**Figure 5 Annual change in United States motorcyclist fatalities 1997-2009, with 10% and 15% decreases in 2009**



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## Reasons for decreases in motorcyclist fatalities

The states suggest several reasons for their 2009 decrease in motorcyclist fatalities. At this time no studies have been conducted to explore these suggestions. In the following, the quoted comments come from various states.

- **Reduced motorcycle travel due to the economic recession.** A substantial amount of motorcycle travel is recreational. In difficult economic times, much recreational spending is cut back. This suggestion will be proven or disproven when motorcycle travel data for 2009 are released. Anecdotal evidence suggests that motorcycle sales slowed in 2009.
  - “It’s the economy, stupid. If you have a choice between paying your mortgage or paying your motorcycle insurance (or motorcycle payment), go with the mortgage. We have seen a lot of recent-model bikes on the market for nice prices.”
  - “For many riders ... riding remains a recreational activity and I suspect riders rode less in 2009 than they did in past years.”
  - “The worst economic conditions in generations ... riders are forced to sell their motorcycles or cut back on their riding.”
  - “Sales of new units fell in 2009 compared to previous years based on what I hear from dealers.”
  - “Motorcycle sales have dropped dramatically causing several dealerships nationwide to close.”
- **Fewer beginning motorcyclists.** Motorcycling attracted many new riders in recent years. This trend may have peaked, aided by the economic factors noted above.
  - “The surge is over. There is a finite supply of potential motorcyclists, and many of these jumped on the bandwagon in the last five years. There just aren’t as many potential new riders as there were.”
- **State motorcycle safety programs.** Many states raised the priority of their motorcycle safety efforts in response to the recent trend of increasing motorcycle crashes, injuries, and fatalities. States noted increasing attention to traffic law enforcement affecting motorcyclists, motorcyclist training, and media urging all drivers to watch out for motorcyclists.
  - “We worked closely with law enforcement agencies throughout the state to begin focusing more on the motorcycle violations.”
  - “2009 was the first year that we included an enforcement wave for motorcycles in our statewide enforcement program.”
  - “... a special Selective Overtime Enforcement initiative targeting motorcycle operators that emphasized compliance with the state’s full helmet law provision....having motorcycle endorsements, required insurance, etc.”

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- “increased the number of motorcycle training facilities from 19 to 32, thereby increasing the enrollment by 35% from the previous year.”
- “increased the number of students who participated in the ... training program by 4.8%.”
- “we began to aggressively promote education directed toward motorcycle riders where they congregate, i.e., motorcycle rallies and races.”
- **Other motorists’ awareness of motorcyclists.** States suggested that both the 11-year increase in motorcycle travel and state motorcyclist awareness campaigns increased motorist awareness.
  - “Motorcycles came to be an expected part of the daily traffic mix.”
  - “People are hearing a lot about motorcycles that they hadn’t heard before.”
- **Return to normal.** Even given general increases in motorcyclist fatalities, some states had abnormally high fatality totals in 2008. For them, a drop in 2009 is only a return to a normal level. On the other hand, states with an abnormally low fatality total in 2008 may have experienced an increase in 2009 for the same reason. This point applies in particular to states with small motorcycle fatality totals. In the 11 jurisdictions with 25 or fewer motorcyclist fatalities in 2008 – 10 states and the District of Columbia – one or two crashes can turn a good year into a bad one, or vice versa.
  - “We commonly get substantial fluctuations [in motorcyclist fatalities] from year to year.”
- **Weather.** Several states suggested that there was less motorcycle travel in 2009 than in 2008 because the 2009 riding season was colder, wetter, or shorter than normal. As with the first bullet, this suggestion will be tested when the 2009 motorcycle travel data are released.

## Discussion

Any decrease in motorcyclist fatalities in 2009 is good news after 11 consecutive years of increases. The expected decrease of more than 10% is very good news. But, as Figure 1 shows, motorcyclist fatalities have decreased substantially before, only to rise again. From 1980 to 1997 motorcyclist fatalities dropped almost 60%. These gains were wiped out in ten years.

Reduced recreational travel due to the recession probably played a major role in the 2009 decrease. As economic conditions improve, recreational travel probably will increase. States should continue or expand their motorcycle safety program activities

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to prevent motorcyclist fatalities from increasing as well. In particular, states should address four major areas that will reduce motorcycle crashes, injuries, and fatalities.

- **Increase helmet use.** Helmets are 37% effective in preventing fatal injuries to motorcycle riders (operators) and 41% effective for passengers (NHTSA, 2009). In 2008, 41% of fatally-injured motorcycle riders and 51% of fatally-injured passengers were not wearing helmets. NHTSA estimates that 823 of these unhelmeted motorcyclists would have lived if they had worn helmets (ibid). Thirty states do not require all motorcyclists to wear helmets. Helmet laws are the only motorcycle safety strategy whose effectiveness is rated as proven (“demonstrated to be effective by several high-quality evaluations with consistent results”) in “Countermeasures That Work” (CMTW), NHTSA’s guide for states (NHTSA, 2010b, Section 5.1.1). 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).
- **Reduce alcohol impairment.** In 2008, 30% of fatally injured motorcycle riders had a blood alcohol concentration above the legal limit of .08 and an additional 7% had lower levels of alcohol (NHTSA, 2009). 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, 2010b, Strategy 5.2.2). The AASHTO Guide 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). More than half of all motorcycle fatal crashes did not involve another vehicle, and speeding likely contributed to many of these.
- **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 the places and times when riders wish to be trained. Both CMTW (NHTSA, 2010b, Strategy 5.3.2) and AASHTO (Potts et al., 2008 Strategies 11.1C1-3) endorse rider training.

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## References

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NHTSA (2010a). Early Estimate of Motor Vehicle Traffic Fatalities in 2009. DOT HS 811 291. Washington, DC: National Highway Traffic Safety Administration.

NHTSA (2010b). Countermeasures That Work: A Highway Safety Countermeasures Guide for State Highway Safety Offices. Fifth Edition, 2010. DOT HS 811 258. Washington, DC: National Highway Traffic Safety Administration.

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.

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**Table 2**  
**Motorcyclist fatalities,**  
**January – September 2008 and**  
**2009, data from 39 states**

DATA REPORTED TO GHSA BY 39 STATES IN JANUARY  
AND FEBRUARY 2010; SOME DATA PRELIMINARY

State	2008 9 months	2009 9 months	change from 2008
AK	8	7	-1
AZ	98	98	0
AR	57	66	9
CA	454	321	-133
CO	76	74	-2
CT	60	37	-23
DE	16	13	-3
FL	413	302	-111
HI	16	26	10
ID	27	33	6
IL	110	113	3
IN	112	104	-8
KS	40	35	-5
KY	79	71	-8
MD	72	52	-20
MA	34	43	9
MI	98	81	-17
MN	62	47	-15
MO	90	76	-14
MT	32	25	-7
NE	20	15	-5
NH	27	19	-8
NJ	72	59	-13
NM	35	32	-3
NY	159	134	-25
NC	147	136	-11
ND	13	7	-6
OH	184	136	-48
OK	73	79	6
PA	202	185	-17
RI	6	16	10
SC	92	80	-12
TN	132	101	-31
UT	32	28	-4
VT	5	8	3
VA	70	59	-11
WA	71	65	-6
WV	41	17	-24
WI	76	77	1
<b>total</b>	<b>3421</b>	<b>2887</b>	<b>-534</b>

**15.6%**