

Motorcycle Crash Deaths and Injuries in New Mexico

Glenda Hubbard, MPH

*Epidemiology and Response Division
New Mexico Department of Health*

The motor vehicle traffic crash death rate in New Mexico declined 31% from 2006 through 2009. In the United States, the motor vehicle traffic death rate was stable from 1999 through 2006 and declined in 2007. However, motorcycle deaths have increased, both nationally and in New Mexico. The motorcycle death rate in New Mexico increased 100% from 1999 (1.1/100,000 population) through 2009 (2.2/100,000) (Figure 1). Motorcycle death rates in the US increased 113% from 1999 (0.8/100,000) to 2008 (1.7/100,000).¹ Motorcycle deaths in NM increased from 20 in 1999 to a high of 52 in 2007. In 1999, 5.5% of the motor vehicle traffic crash deaths in NM were motorcycle riders, while in 2009, 15.2% of the motor vehicle traffic crash deaths were motorcycle riders. Nationally, 5.5% of the motor vehicle traffic crash deaths were motorcycle riders in 1999, while in 2007, 11.6% of the motor vehicle traffic crash deaths were motorcycle riders. This report will address motorcycle deaths, injuries and hospitalizations in New Mexico.

Methods

Demographic data on motorcycle deaths of NM residents, the nature of the injury resulting from the fatal motorcycle crash and the collision involvement or non-collision involvement were obtained from the NM Bureau of Vital Records and Health Statistics. The data on motorcycle hospitalizations of NM residents were obtained from the NM Health Policy Commission, which collects hospital discharge data from non-federal hospitals in New Mexico. Motorcycle hospitalizations are based on E-codes, which describe the cause, circumstance and intent of the injury. About 75% of the injury-related hospitalizations are e-coded, so there is probably an undercount of motorcycle crash hospitalizations. Hospital discharges included in this analysis were limited to those with a principal diagnosis of injury and had an E-code designating a motorcycle crash. Death and hospitalization rates were age-adjusted to the 2000 Standard US population.

Data on deaths by helmet use and motorcycle injuries in NM was obtained from the *New Mexico Traffic Crash Information* report² prepared for the New Mexico Department of Transportation, Traffic Safety Bureau by the University of New Mexico, Division of Government Research. The statistics on motorcycle crashes from the report reflect only those crashes that occurred on public roadways in NM and resulted in death, personal injury of \$500 or more in property damage.

Additional information on motorcycle traffic deaths that occurred in NM from 2007-2009, including month of year, day of week, speeding (data for 2009 only), and road conditions were obtained from the Fatal Analysis Reporting System (FARS) of the National Highway Traffic Safety Administration³.

Results

The rate of motorcycle death per 100,000 registered vehicles in NM increased from 1999 (88.0/100,000) to 2001 (120.3/100,000), remained stable from 2004-2008 and declined 24% in 2009 (85.1/100,000) (Figure 2). In the US, the motorcycle death rate per 100,000 registered motor vehicles increased from 59.8/100,000 in 1999 to 72.5/100,000 in 2007. Motorcycle riders 35-44 years of age and 45-54 years of age had the highest motorcycle death rate (3.6/100,000 and 3.5/100,000 respectively) from 2005-2009. The motorcycle death rate among 25-34 year olds was 3.2/100,000. The majority of motorcycle riders killed were male (92.4%). The male motorcycle rider crash death rate for 2005-2009 was 4.1/100,000 while the female motorcycle rider death rate was 0.3/100,000 population. Non-Hispanic whites had the highest motorcycle death rate (2.5/100,000) for 2005-2009 followed by Hispanics (2.3/100,000). American Indians, Asians and Blacks

had a motorcycle death rate of 0.9/100,000 (N = 14). The southeast region of NM had the highest motorcycle death rate (3.0/100,000) followed by the northeast region (2.7/100,000) for 2005-2009. The motorcycle death rate for the southwest region was 2.2/100,000 while Bernalillo County and the northwest region each had a motorcycle death rate of 1.9/100,000. The motorcycle death rate was higher in rural counties (2.5/100,000) compared to urban counties (2.0/100,000). Urban counties include Bernalillo, Dona Ana, Sandoval, San Juan, Santa Fe, Torrance and Valencia counties.

Drivers of motorcycles accounted for 92.1% of the motorcycle deaths, while 2.3% of motorcycle deaths were passengers. Whether the motorcycle rider was a driver or a passenger was unknown for 5.6% of motorcycle deaths.

Motorcycle riders injured in a collision with a car, pick-up truck or van from 2005-2009 accounted for 44.4% of the motorcycle deaths. Motorcycle riders injured in a non-collision incident, including falling from the motorcycle, being thrown from the motorcycle or overturning of the motorcycle accounted for 34.2% of the motorcycle deaths. Traumatic brain injuries accounted for 20.4% of motorcycle deaths while unspecified multiple injuries accounted for 53.8% of motorcycle deaths.

No deaths occurred among motorcycle riders who were wearing a helmet on NM public roadways in 2005, 2006, 2007 and 2009. One death occurred among a motorcycle rider who was wearing a helmet in 2008. From 2000 through 2004 an average of 26% of motorcycle deaths occurred among motorcycle riders who were wearing helmets each year.

In 2009, the motorcycle hospitalization rate in NM was 0.8/10,000 population. Motorcycle riders accounted for 20.3% of the motor vehicle traffic crash hospitalizations.

There were 1,130 motorcycle injuries in NM during 2009. The highest motorcycle injury rate was among 20-24 year olds (126.7/100,000), followed by 25-29 year olds (96.9/100,000). In 2009, 81% of motorcycle riders involved in a crash were male, with male motorcycle riders 20-24 years of age having the highest motorcycle crash involvement rate (296.0/100,000). In

2009, 7.1% of motorcycle riders in crashes in NM were in an alcohol involved crash.

In 2009, 50.8% (724) of motorcycles involved in crashes collided with another motor vehicle. Another 30.5% of motorcycles involved in crashes were non-collision incidents with nearly half being related to overturning a motorcycle. Motorcycle crashing into a fixed object accounted for 10.9% of motorcycle crashes.

The highest number of fatal motorcycle crashes for the years 2007-2009 occurred in May and June (18 and 19 respectively). April had 15 fatal crashes followed by July with 14 fatal crashes. The least number of fatal crashes occurred in January (1) and February (3). The largest number of motorcycle deaths for the years 2007-2009 occurred on Saturday (30) followed by Sunday (23). Thursday had the lowest number of fatal motorcycle crashes (7). The majority of fatal motorcycle crashes for the years 2007-2009 occurred during daylight hours (71%). Dark but not lighted conditions accounted for 21% of fatal motorcycle crashes. Road surface conditions were dry in 98% of the fatal motorcycle crashes. The motorcycle driver was not speeding in 89% of fatal motorcycle crashes in 2009.

Discussion

Universal helmet laws are the most effective way to reduce the number of deaths and traumatic brain injuries that result from motorcycle crashes.⁴ Twenty states had universal helmet laws in 2010. Helmets reduce the risk of motorcycle deaths by 37% and the risk of head injury by 69%.⁴ The average number of lives saved by helmet use per 100,000 registered motorcycles for states with a universal helmet law in 2008 was 40 and the average money saved by helmet use per 100,000 registered motorcycles for states with a universal law was \$66 million. The average number of lives saved by helmet use per 100,000 registered motorcycles for states with a partial helmet law in 2008 was 14 and the average money saved by helmet use per 100,000 registered motorcycles for states with a partial helmet law was \$23 million. The average number of lives saved by helmet use per 100,000 registered motorcycles for states with no helmet law in 2008 was 6 and the average money saved by helmet use per 100,000 registered motorcycles for states with no law was \$10 million.

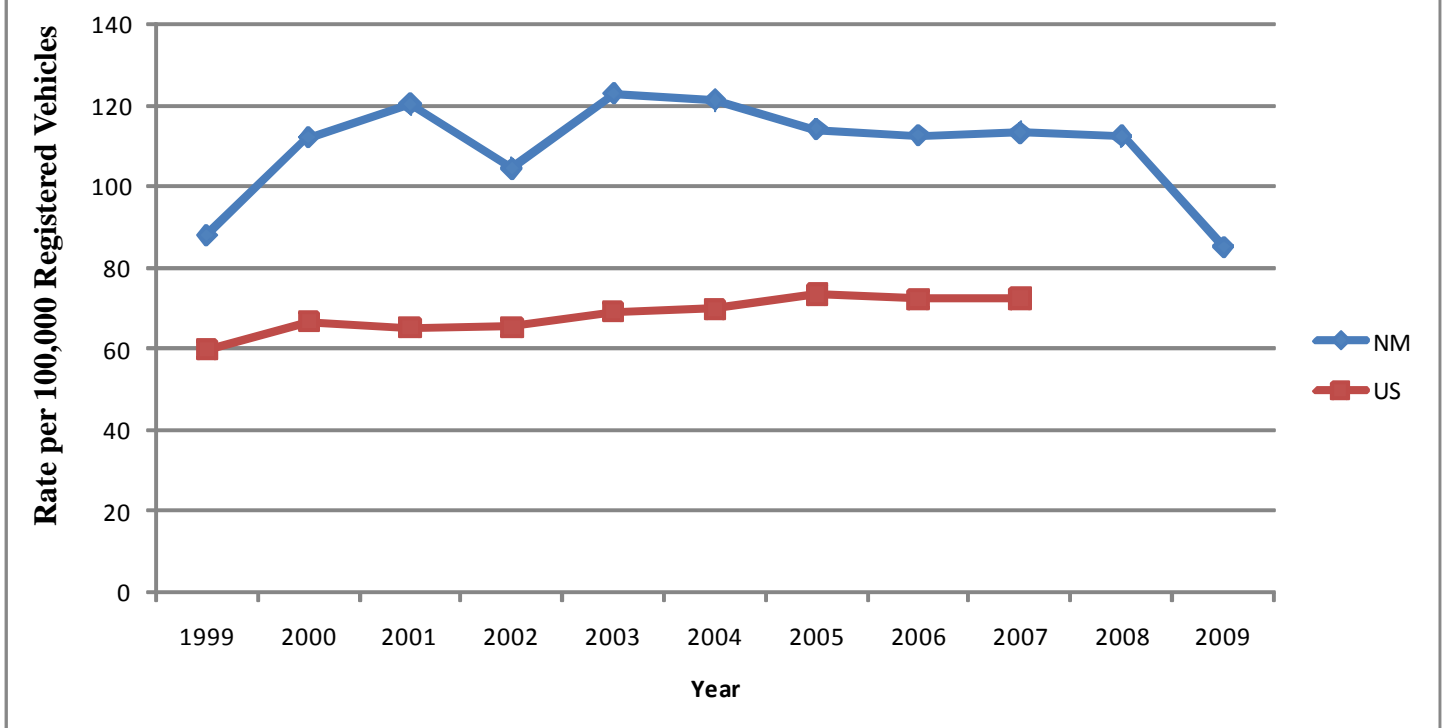
A universal helmet law requires all motorcycle riders and passengers of all ages to wear helmets that meet the Department of Transportation standard whenever riding. A partial helmet law only requires specific groups of people, such as those below a certain age, to wear helmet.

New Mexico has a partial helmet law enacted in 1978, which requires people 17 years of age and younger to wear a helmet while riding a motorcycle. The state ranked 50th in the nation for lives saved (2 lives saved per 100,000 registered motorcycles in 2008) and 50th in the nation for money saved due to helmet use (\$4M).⁴ New Mexico should consider enacting a universal helmet law in order to reduce deaths and injuries from motor vehicle crashes.

References

1. Motorcycle Crash-Related Data, Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention. Online access, <http://www.cdc.gov/Features/MotorcycleSafety/>
2. New Mexico Traffic Crash Information, 2009, Traffic Safety Bureau, Programs Division, New Mexico Department of Transportation.
3. Fatal Analysis Reporting System, National Highway Traffic Safety Administration, online access, <http://www-fars.nhtsa.dot.gov/Main/index.aspx>
4. Motorcycle Safety Fact Sheet, Centers for Disease Control and Prevention, online access, http://www.cdc.gov/Motorvehiclesafety/pdf/mc_state/new_mexico-a.pdf

Figure 2. Motorcycle Death Rate per 100,000 Registered Vehicles NM and US, 1999-2009



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C. Mack Sewell, Dr.P.H., M.S.
State Epidemiologist

Michael G. Landen, M.D., M.P.H.
Deputy State Epidemiologist & Editor

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**Figure 1. Motorcycle Crash Death Rates,
New Mexico, 1999-2009**

