



SAFE TRANSPORTATION
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Assemblymember Bill Quirk
22320 Foothill Blvd, Suite 540
Hayward, CA 94541

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Dear Assemblymember Quirk,

I am writing to share with you some of the results of my research on motorcycle lane-splitting. I have been conducting a study of several aspects of motorcycle safety in California and have completed an analysis of the impact of lane-splitting on the injury outcomes of collision-involved motorcyclists.

In this study, the California Highway Patrol used a one-page supplemental form to record information that is not usually collected during motorcycle collision investigations. Using the form, officers recorded information on whether the motorcyclist was lane-splitting at the time of collision, motorcycle and traffic speed, helmet characteristics, body region of injury, and other factors. We also obtained copies of the original police collision reports. The primary findings of my current data analysis are as follows.

Of the 6,000 motorcyclists I studied, nearly 1,000 were lane-splitting at the time of their collision. When we compare motorcyclists who were lane-splitting with those who were not, we can see that the lane-splitting riders were strikingly different. Compared with other motorcyclists, lane-splitting motorcyclists were:

- Using better helmets
- Traveling at lower speeds
- More often riding on weekdays and during commute hours.
- Less often carrying a passenger
- Less often under the influence of alcohol
- Less likely to suffer a head injury (9% vs 17%)
- Less likely to suffer a torso injury (19% vs 29%)
- Less likely to suffer a fatal injury (1.2% vs 3.0%)

We also found that the manner in which motorcyclists split lanes varies greatly. Most riders exceeded the speed of the surrounding traffic by a small or moderate amount. For example, 69% of riders were exceeding the traffic speed by 15 MPH or less. A significant number were

traveling at excessive speed; 14% had a "speed differential" of 25 MPH or greater, and 3% had a speed differential of 40 MPH or greater. Lane-splitting in such a manner is likely to increase the risk of being involved in a traffic collision - which we are not able to study using our current data set. What we can study is how the injury outcomes are influenced by the manner of lane-splitting, given that a rider has been involved in a collision. We used multivariate regression methods to do this.

We found that both traffic speed and motorcycle speed differential were important in predicting the occurrence of injury. Traffic speed is, of course, a known predictor of injury occurrence in all types of motorcycle collisions, and the situation is no different in collisions involving lane-splitting. Our overall findings with respect to the manner of lane-splitting are:

- There was no meaningful increase in injury incidence until traffic speed exceeded roughly 50 MPH
- Motorcycle speed differential is a stronger predictor of outcomes
- Speed differentials of up to 15 MPH were not associated with changes in injury occurrence
- Above that point, increases in speed differential were associated with increases in the likelihood of injury of each type

I hope you find this information useful. You will be able to access these and other findings when I release my report on this research later this month.

Best regards,



Thomas Rice, MPH, PhD
Research Epidemiologist