

## Strategies for Reducing Motorcyclist Injuries: Engaging Stakeholders to Apply Evidence-Based Countermeasures that Work

Since motorcyclists are more vulnerable than enclosed vehicle users on the road, they are substantially more likely to get injured in a crash. While evidence-based countermeasures are available, this project aims to shorten the implementation cycle in translation of research into practice at the state level. For this, statewide motorcycle safety plans provide a critical intervention opportunity. Such safety plans often identify risk factors and consider countermeasures. To identify risk factors, recent motorcycle crash data in Tennessee was analyzed. Then motorcycle safety practices across the United States and other countries were reviewed to assist Tennessee in formulating strategies to reduce motorcycle crashes and injuries.

Descriptive analysis of the Tennessee data revealed that injury severity of a rider in a motorcycle crash can be affected by both environmental factors and personal decisions. Environmental factors such as roadway configuration and lighting conditions were linked to injury severity in this analysis. However, actions taken by riders such as choosing not to wear a helmet, wearing a noncompliant helmet, improper helmet use and riding while impaired had significant impacts. Additionally, this implies that more effort will be required for outreach and education encouraging motorcyclists to properly wear a DOT compliant helmet. The results also reveal that the injury severity of a rider can be considerably higher when the rider is impaired by alcohol or drugs. Thus, targeted outreach and enforcement efforts regarding the importance of being clean/sober when riding a motorcycle are needed and would likely be impactful.

The review of U.S. motorcycle safety practices encompassed rider training and education programs, motorcyclist operator manuals, media campaigns and motorcycle safety advisory groups. The analysis indicates that Tennessee was in the top 12 of most deadly states for motorcyclists as measured by fatalities per 10,000 motorcycle registrations during the period studied.

Based on identified practices in other states, Tennessee may have some opportunities to expand its motorcycle safety program. For example, several states make use of more robust media campaigns with different messaging much of which targets motorcyclists. Another opportunity for Tennessee is enhanced communication with motorcyclists via online and printed materials. Examples to consider include the state of Montana managing a Facebook webpage devoted to motorcycle safety, South Dakota performing online surveys of motorcyclists and Minnesota distributing different types of printed educational materials. Finally, there is likely value in re-establishing the motorcycle safety coalition, creating a motorcycle safety advisory group or some similar entity to seek recommendations on motorcycle safety as well as establishing a wider network for distribution of safety information to riders.

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