

## 2005 - Identifying Best Practices States in Motorcycle Rider Education and Licensing

### ABSTRACT

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**Published:** Journal of Safety Research, 2005, 36, 19-32

#### **Problem:**

After decreasing to a historic low in 1997, motorcycle crash-related fatalities are increasing. Although causes remain unclear, motorcycle rider education and licensing play key roles in reducing motorcycle crashes and injuries. Yet, little is known about what constitutes effective rider training and licensing. This study develops a model of best practices in motorcycle rider education and licensing and combines primary and secondary data to identify states that most closely adhere to this model. Evidence on the validity of the model is also examined. *Method:* States were rated along three areas of best practices: (a) program administration; (b) rider education; and (c) licensing based on 2001 data collected for a National Highway Traffic Safety Administration (NHTSA)-sponsored study. *Results:* Results indicate wide variation in states' adherence to best practices; several states meet most, others very few. When the areas of best practices are considered separately, a state tends to behave similarly on all three. Initial evidence supports the validity of the model, with high best practices states having the lowest rates of motorcycle fatalities. *Impact on Traffic Safety:* As motorcycle-related crashes increase and state and federal support for rider education programs diminishes, it is critical that states identify deficiencies in their program and learn from successful states about efficient, cost-effective strategies for increasing best practices in motorcycle rider education and licensing.

#### **Introduction**

Despite significant progress since the enactment of federal motor vehicle and highway safety legislation in 1966, the annual toll of traffic crashes remains high on U.S. roadways. In 2001, traffic crashes continued to account for 95% of all transportation fatalities and 99% of injuries, and represented the leading cause of death for individuals ages 4 through 33 (National Highway Traffic Safety Administration [NHTSA], 2003).

Recent data indicate that deaths and injuries related to motorcycle crashes are becoming a larger portion of this grave public health problem. After decreasing steadily to a historic low in 1997, motorcycle crash-related fatalities have been increasing since 1997, while injuries have been increasing since 1999. In 2003, 3,661 motorcyclists were killed—an increase of over 70% from 1997.

While the causes of the sudden increase in motorcycle fatalities remain unclear, over the years researchers have identified several factors that are instrumental in reducing fatal motorcycle crashes and motorcycle-related injuries. Factors aimed at crash prevention offer the greatest potential safety benefit for motorcyclists, since they occur before a crash takes place. Injury mitigation and emergency response are also important factors in reducing motorcycle fatalities and injuries, but of less direct benefit to riders since they occur after a crash takes place.

Among crash prevention measures, research points to the key role of motorcycle rider education and licensing. Although evidence of the effectiveness of rider education on crash reduction is mixed, several studies have shown that trained riders tend to have fewer crashes, less severe crashes, and overall lower cost of damage resulting from crashes (Billheimer, 1998, McDavid et al., 1989, Mortimer, 1982). Similarly, properly licensed motorcycle riders are less likely to be involved in fatal crashes than their unlicensed counterparts (Billheimer, 1998).

Despite this emphasis on rider education and licensing, little attention has been paid to what constitutes effective rider training and licensing. Although in 2003 there were 47 state-legislated rider education programs in the United States, each state-sponsored rider education program was administered differently. In addition, all 50 states and the District of Columbia require a license to operate a motorcycle on the highway. However, the degree of coordination between rider education programs and licensing agencies varies widely across states (Baer, Cook, & Baldi, in press). The result of this fractured situation is that little systematic is known in terms of potentially effective practices used by states in implementing motorcycle rider education and licensing.

## **Purpose**

The purpose of this study is to develop a model of best practices in motorcycle rider education and licensing based on current research and reports published by NHTSA, and use detailed rider education and licensing data collected from all 47 states that offer state-legislated motorcycle rider education to identify the states that most closely adhere to this best practices model in terms of efficient and effective program components. In addition, evidence of the validity of the model is assessed by examining the relationship between best practice scores and motorcycle fatalities.

It is important to identify states with cost effective and efficient policies and practices that can be offered as models to be adopted by other states where possible. In this era of competing financial resources, this will allow state rider education and training programs to maximize limited funding while continuing to meet increasing demand.

## **Background**

Research examining the effectiveness of motorcycle rider education on crash and injuries dates to the 1970s. These studies are typically designed to answer the question “are riders who receive training less likely to be involved in crashes than their counterparts who do not?” The evidence has been less than decisive, with most studies finding positive effects of rider education,

## **Method**

To construct a dataset containing detailed information about the program administration, rider education, and licensing practices in each state, we began by linking each of the 13 practices identified in the best practices model to one or more measures. The thirteen practices were identified and organized within three broad areas: program administration, rider education, and licensing. Program administration refers to the structure and organization of a jurisdiction's rider education and licensing activities. Practices related to rider education concern the details of delivering training efficiently and effectively to motorcycle operators. Finally, licensing practices require operators to ride legally and prescribe procedures for ensuring that only skilled riders are licensed to operate motorcycles.

The administration and licensing categories evaluated the organization of the course and integration of licensing into the course. The education category assessed the quality of the course itself. This category was broken down into subcategories of sound curricula, effective training and delivery, outreach and information efforts, incentives for training, regular program assessments and quality control, and instructor education and teaching.

States were rated along the three areas based on 2001 data collected for a National Highway Traffic Safety Administration (NHTSA)-sponsored study.

## **Results**

Overall best practices scores were assigned to each state by summing the total points awarded within the program administration, rider education, and licensing areas. A total of 36 points were possible for the best practices scale and state scores ranged from a low of 3 (South Carolina) to a high of 24 (Oregon). To identify clusters of states with similar practices, the states were classified as "low," "medium," and "high" based on the distribution of their overall scores. Results indicate wide variation in states' adherence to best practices; several states meet most, others very few. When the areas of best practices are considered separately, a state tends to behave similarly on all three. Initial evidence supports the validity of the model, with high best practices states having the lowest rates of motorcycle fatalities.