The Effect of the 1997 Texas Motorcycle Helmet law on Motorcycle Crash Fatalities

Abstract

Author information: Bavon A, Standerfer C.

OBJECTIVES:
This study seeks to determine the effect of the Texas motorcycle helmet law on fatalities since the repeal of the universal helmet law in 1997.

METHODS:
Texas monthly motorcycle accident data between 1994 and 2004 were obtained from the National Highway Transportation Safety Administration's Fatality Analysis Reporting System (FARS) and supplemented with motorcycle registration data from the Texas Department of Transportation. An ARIMA model was used to estimate the impact of the law.

RESULTS:
A sharp increase in fatality rates occurred immediately following the implementation of the law in September 1997. Deaths increased by 30%, fatality rates per motorcycle registrations increased by 15.2%, and fatality rates per vehicle miles traveled increased by 25% after repeal. Helmet use decreased from 77% in 1996 to 63% in 1997 and 36% in 1998 and thereafter. The parameter estimates of the ARIMA model (0,0,0) (0,1,1) show that the change in the law led to statistically significant increases of 2.3 fatalities and 1.18 fatality rate per 100 billion vehicle miles traveled.

CONCLUSIONS:
The repeal of the universal helmet law in Texas in 1997 has had a significant adverse effect on motorcyclist fatalities in Texas.