

Rate of bicycle-related fatalities significantly lower in states with helmet laws

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Existing research shows that bicyclists who wear helmets have an 88 percent lower risk of brain injury, but researchers at Boston Children's Hospital found that simply having bicycle helmet laws in place showed a 20 percent decrease in deaths and injuries for children younger than 16 who were in bicycle-motor vehicle collisions.

The cross-sectional study, conducted by William P. Meehan III, MD, Lois K. Lee, MD, MPH, Rebekah C. Mannix, MD, MPH of Boston Children's Hospital, and Christopher M. Fischer, MD, of Beth Israel Deaconess Medical Center, was published in the *Journal of Pediatrics*, and suggests that having these laws may influence parents to require their children wear helmets.

"Past research shows that laws can be an important factor in helping parents adhere to best practice guidelines," says Meehan. "For parents who feel like there is conflicting information related to child health, this evidence supports the fact that helmets save lives and that [helmet laws](#) play a role."

On average, 900 people die annually in bicycle-[motor vehicle collisions](#)—three quarters die from head injuries. At the start of the 12-year study (1999 to 2010), 16 states had bike helmet laws, and 35 did not. The researchers identified all relevant fatalities, totaling 1612, in states with and without bike helmet laws.

After adjusting for factors previously associated with rates of motor vehicle fatalities (elderly driver licensure laws, legal blood alcohol limit and household income) the adjusted [fatality rate](#) was still significantly lower in states with helmet laws.

To conduct the retrospective study, researchers analyzed data obtained from the [Fatality Analysis Reporting System](#) (FARS)—a census, compiled by the [National Highway Traffic Safety Administration](#), which included information from all 50 states,

including the District of Columbia and Puerto Rico.

Since the FARS database is limited to injuries sustained during a motor vehicle collision that resulted in the death of at least one person within 30 days of the collision, the findings are likely an understatement of how important helmet laws are. "As a result of the data only capturing deaths, rather than all injuries, our findings likely underestimate the effects of the mandatory helmet laws, because we did not capture all pediatric bicycle-related injuries," says Mannix.

The American Academy of Pediatrics recommends that all cyclists wear helmets that fit properly for each ride, and supports legislation that requires all cyclists to wear helmets.

Provided by Children's Hospital Boston

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