

The Effect of Seat Belt Usage on Hospitalization and Injury Severity of Motor Vehicle Crash Victims

Unless otherwise noted, all data was derived from the Ohio Trauma Acute Care Registry

There were 44,368 persons injured in motor vehicle crashes between 1999 and 2005 who suffered injuries severe enough to be admitted to a hospital for 48 hours or more. Of these, 30,416 (68.5%) were not wearing seat belts. This is highly disproportionate to the total percentage of people who do not wear seat belts (<30%*).

In-hospital deaths are greatly reduced by seat belt usage: 5.7% mortality for unbelted victims versus 2.9% for victims who wore seat belts.

Failure to wear seat belts increases the severity of injuries by nearly 30%. The average Injury Severity Score for belted victims is 10.53 versus an average Injury Severity Score for unbelted victims of 13.64.

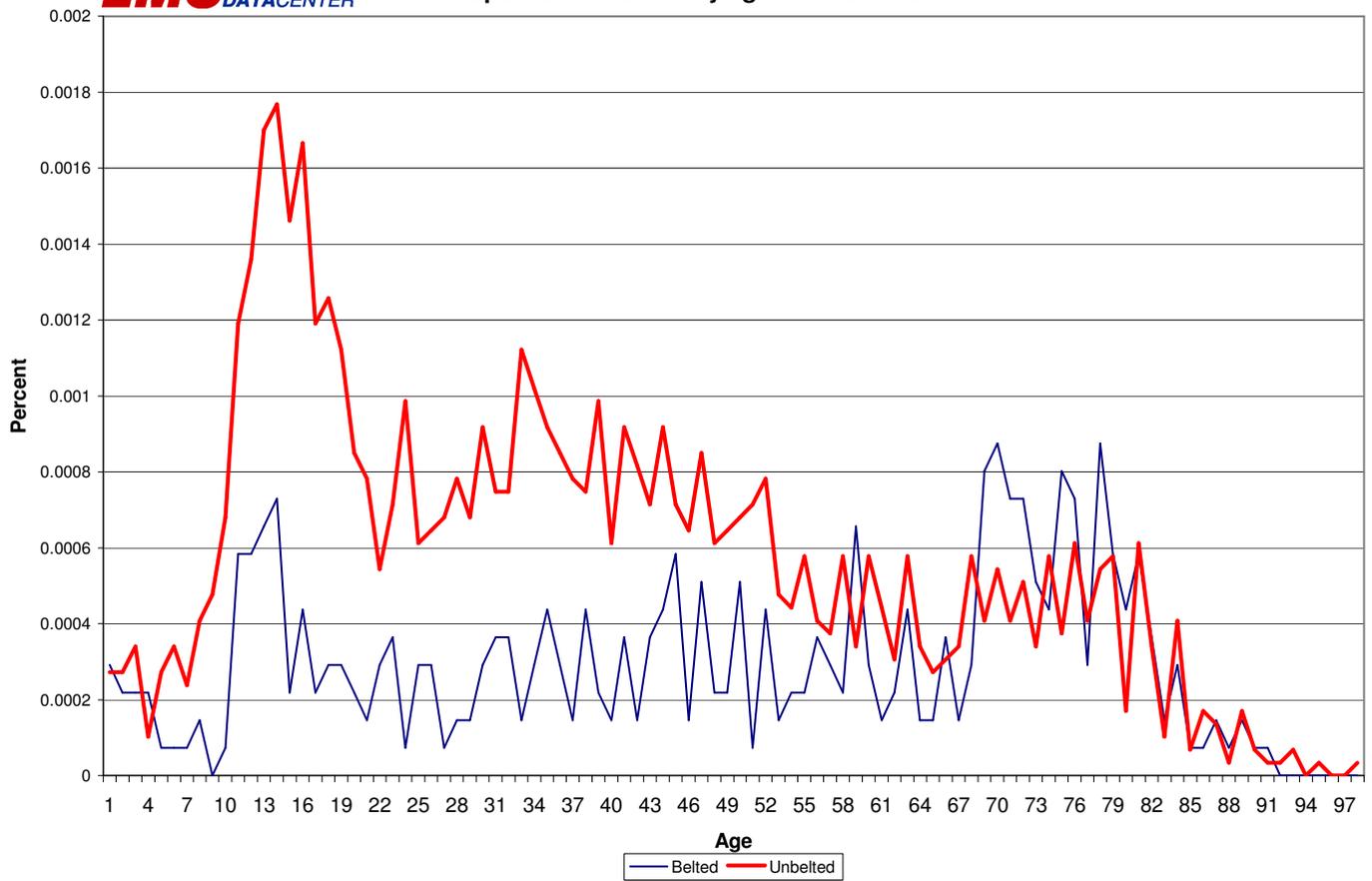
Other indicators also reflect the ability of seat belts to reduce injury severity. Overall length of stay in the hospital is 16% shorter for belted victims; those who used seat belts were 12% less likely to need to be placed in an intensive care unit and their stays in the ICU were 20% shorter; and belted victims were nearly 25% less likely to need to have an operation to repair their injuries.

Finally, there is a 50% increase in the number of traumatic brain injuries** suffered by unrestrained motor vehicle crash victims over those who used their seat belts.

* Source: Governor's Highway Safety Office

** Traumatic brain injury defined by Ohio Brain Injury Advisory Board of the Ohio Rehabilitative Services Commission

Proportion of deaths by age and belt use





Average Injury Severity Score (ISS) by Age and Belt Use

