

Road fatalities among young and old much improved, but still high

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Road deaths among young adults and seniors are down nearly 60 percent since 1968, but they still have the highest road fatality rates among all age groups, say University of Michigan researchers.

Fatality rates among drivers, passengers, motorcyclists, bicyclists and [pedestrians](#) are 21 per 100,000 persons for those ages 15-24 and 19 per 100,000 for those 75 and older, compared to 14 per 100,000 persons ages 25-74, they say.

A new study in the journal [Traffic Injury Prevention](#) by Michael Sivak and Brandon Schoettle of the U-M Transportation Research Institute examines changes by decades in U.S. fatalities per population across different [age groups](#) from 1958 to 2008.

While fatality rates for all age groups increased from 1958 to 1968—when no major safety interventions were introduced—they have been cut in half or more for each group since then: 58 percent for those 15-24 and those 75 and older; 62 percent for those 65-74; 51 percent for those 45-64; and 50 percent for those 25-44. For the age groups with no drivers, the reductions were 75 percent for those 5-14 and 78 percent for those 5 and under.

"From 1958 to 1968, the fatality rate per distance driven stayed relatively unchanged," said Sivak, research professor and head of UMTRI's Human Factors Group. "However, because the amount of driving per population increased, so did the fatality rate per population.

But the fatality rates decreased for each of the four decades between 1968 and 2008, with the largest decrease in the overall fatality rate in the last decade, 1998 to 2008."

The researchers say that the fact that changes in the fatality rate were not the same across all age groups could be the result of either differential age changes in the amount of driving (or general exposure to traffic) per person, differential age effects of various safety countermeasures, or both.

Because information about the changes in driving and general exposure by age group is not available, Sivak and Schoettle cannot pinpoint exact reasons for the patterns in the fatality rate. However, they offer several possible explanations consistent with the age-related patterns of changes.

These include: required installation of front safety belts and energy-absorbing steering columns starting in 1968 (which likely had a larger impact on older persons); establishment of child-restraint laws in the late 1970s and early 1980s; widespread introduction of front [air bags](#) in 1989 (given the fact that younger drivers and passengers were less likely to use safety belts, the benefit of air bags may have been more pronounced for them); increase in the quality and use of child restraints and boosters beginning around 1995; and the increasing prevalence of side air bags and major vehicle improvements in side-impact performance beginning around 1990 (likely having the largest effects on the youngest and the oldest persons).

The researchers say that other passive-safety measures, as well as interventions in the active-safety domain (antilock brakes, electronic stability control systems, improved headlights) and in the policy domain (safety belt laws, graduated licensing, minimum drinking age, alcohol tolerance limits) are likely to have differential age effects.

"It is important to emphasize that although both [young adults](#) and [seniors](#) have experienced great improvement in the [fatality rate](#) per person, their rates are still higher than those of middle-aged persons," Sivak said.

More information: Complete Study: An Analysis of U.S. Road Fatalities per Population: Changes by Age From 1958 to 2008 - www.tandfonline.com/doi/full/10.1080/15389588.2011.588980

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