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Study Finds School Buses among Safest Way to Travel in Iowa

University of Iowa researchers recently published findings that show school buses are among the safest forms of road transportation in Iowa.

Jingzhen (Ginger) Yang, Ph.D., assistant professor of community and behavioral health in the UI College of Public Health, and colleagues examined the incidence of school bus crashes in a study published in the March issue of the injury prevention journal *Accident Analysis and Prevention*.

"We discovered school buses in Iowa experience low crash rates and very few crashes result in injuries," said Yang, lead author of the study.

On average, there were about 13 nonfatal injuries and less than one fatality per 100 million bus miles traveled. When compared with overall vehicle crash fatality and injury rates, fatalities in school bus crashes were more than three times less likely, and injuries during school bus crashes were more than five times less likely.

The researchers looked at crash data from January 2002 through December 2005 identified in the Iowa Crash Data, a comprehensive database of all reported crashes in Iowa. They then used school bus mileage data, provided by the Iowa Department of Education, and calculated the crash, injury and fatality rates per 100 million bus miles traveled.

"As far as we know this is the only study that examines bus crash rates with actual, not estimated, school bus mileage," Yang said. "The particular strength of this paper is that we examined overall incidence of school bus crashes and injury incidence using accurate measures for both the numerator -- crashes and injuries -- and the denominator -- school bus miles traveled -- which provides a better picture of school bus crashes."

Researchers also noted that passenger vehicle drivers and passengers were more likely to be the cause of the crashes and were more likely to be injured in school bus collisions. In particular, crash rates of vehicle drivers ages 15 to 18 were almost two-fold compared to those of bus drivers, due to following too closely and/or speeding.

"The low likelihood of both crashes and injuries for buses compared with passenger vehicles indicates that school buses are a very safe form of transportation," said Corinne Peek-Asa, Ph.D., director of the UI Injury Prevention and Research Center and co-author of the paper.

"Furthermore, in bus crashes it is the passenger vehicle operators who are more often at fault and more often injured. This indicates the need for safe driving education for parents and people driving around school buses, which may be beneficial to the safety of all children traveling to and from school."