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Socioeconomic status linked to vehicle safety

Bethesda, MD – Improvements in motor vehicle safety have been recognized by the Centers for Disease Control and Prevention as ranking among the 20th century's top public health achievements, however a recent study led by researchers in the Department of Preventive Medicine and Biometrics (PMB) at the Uniformed Services University of the Health Sciences (USU) seems to show that the improvements aren't benefiting all segments of the population equally. The study appears in the April issue of *Traffic Injury Prevention*.

“Vehicle safety advances have saved hundreds of thousands of lives in recent decades,” said Deborah Girasek, PhD, MPH, Director, Social & Behavioral Sciences in the PMB. “What we found was that people in lower socioeconomic groups don't enjoy the same access to these improvements as their wealthy counterparts, most likely because of how our society introduces protective technology into the vehicle market.” Typically, safety advances are first offered on luxury vehicles, at the discretion of automobile manufacturers. The National Highway Traffic and Safety Administration (NHTSA) may eventually mandate that a safety feature be included on all new vehicles, after an extended process of Federal rulemaking and production phase-in. People who buy used vehicles do not benefit from such advances until the safer models “trickle down” to the used car market. According to the NHTSA, it takes a median of 12.5 years for cars to age out of circulation in the United States (Lu, 2006).

In collaboration with Dr. Brett Taylor, a 2007 USU MPH graduate, Dr. Girasek studied vehicles registered in Maryland zip codes that represented a range of household incomes. They found that as median household incomes increased, so did the proportion of vehicles that came equipped with side airbags and electronic stability control as standard equipment. Vehicles registered in upper income areas were also newer, on average, and more likely to have received a Good or Acceptable crash test rating from the Insurance Institute for Highway Safety.

“These results may not be surprising,” said Girasek “but we believe this is the first time that this traffic safety advantage has been documented. It seems unlikely that we would accept levels of crash protection that were tied to product price in other modes of transportation. Suppose, for example, that in addition to free drinks and wider seats, first class airline tickets came with better odds of surviving a plane crash?”

Head protecting side impact airbags have been shown to reduce a driver's risk of death in a nearside collision by 37% (McCartt & Kyrychenko, 2007). Electronic stability control has been shown to reduce fatal car crashes involving single vehicle by 30-50%, and fatal rollover crashes by 70 to 90% regardless of vehicle type (Ferguson, 2007). Motor vehicle crashes kill more Americans between the ages of 1 and 45 than any other cause.

The article is available at no charge. <http://www.informaworld.com/smpp/content~db=all~content=a920910487>.

Located on the grounds of Bethesda's National Naval Medical Center and across from the National Institutes of Health, USU is the nation's federal school of medicine and graduate school of nursing. The University educates health care professionals dedicated to career service in the Department of Defense and the U.S. Public Health Service. The University also has graduate programs that are open to civilian and military applicants in the biomedical sciences and public health. For more information about USU and its programs, visit www.usuhs.mil.