

Teen drivers would benefit from greater restrictions

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Most states have graduated licensing for teen drivers but such programs should be even more restrictive, according to a study by the University of Michigan Transportation Research Institute.

Motor vehicle crashes are the greatest single health threat to teens," said UMTRI researcher C. Raymond Bingham. "Little or no positive change has occurred in teen crash numbers in the past 10-15 years. Clearly, current measures aimed at curbing teen drivers' involvement in crashes are not sufficient."

Bingham and UMTRI colleagues Jean Shope, Julie Parow and Trivellore Raghunathan studied data from nearly 7,000 teen drivers, Michigan State Police crash records and Michigan Secretary of State driver history records from 1989 to 1996 to identify crash types for which teen drivers are at excess risk, and analyzed psychosocial and behavioral factors that predict crash types.

By calculating crash rates using miles driven by an individual driver instead of the more common vehicle miles driven or by using per population methods, the researchers are able to provide a greater degree of specificity with regards to individual travel behavior and exposure to crash risk for men and women in different age groups. In addition, they examined multiple characteristics of crashes to create more realistic crash types and to measure their effect on crash risk.

Teens are at excess risk, they say, for all crash types, which include a

combination of various elements: characteristics of the teen driver, time of day, day of week, driver behavior and the context within the vehicle.

"Inexperience, underdeveloped driving skills and immaturity together contribute to poor performance of driving tasks," Bingham said. "Teens are about two-and-a-half times more likely to be in a crash than adults, but certain factors result in large increases in risk.

"One of these is having passengers. From other research, we know it is actually other teen passengers that pose the greatest risk, and we know that each additional passenger results in additional increase in crash risk."

Bingham and colleagues say that driving on weekends and at night are the next most common characteristics of teen driving that increase their crash risk. And when these things happen simultaneously—driving on a weekend night with passengers—they collectively contribute to substantial increases in teen crash risk.

Most states have passenger and night-time driving restrictions for teens, but none limit driving on weekends. Graduated driver licensing programs, the researchers say, should place restrictions on all of these interacting factors.

"Because restrictions target elements of high-risk crash types, reductions in restrictions should not just target one driving situation at a time, but should decrease in concert with each other so that crash types, and not just the individual elements contributing to crash risk, are addressed," Bingham said. "This would also result in restrictions being lifted more slowly and a more gradual increase in the exposure of teens to high-risk driving conditions, allowing them time to acquire the experience and skill needed to successfully handle those risks."

The researchers found that 56 percent of teen drivers in their study had been in at least one crash, but crash rates improved significantly as the teens gained more driving experience. Women, both teen and adult, have higher crash rates than men for all crash types, except those involving alcohol.

The difference between teenage and adult women's crash rates, however, is smaller than between teen and adult men for all crash types.

Females at age 16 are 3.7 times more likely to be in a crash than adult women drivers ages 45-65, but at age 19 are only 1.2 times more likely. For male drivers, 16-year-olds are 5.1 times more likely to be in a crash than adult men 45-65, but the rate drops to 1.6 times more likely at age 19.

The study also looked at predictors of crash involvement for teen drivers. The best predictor for males was alcohol misuse in the past year. Measures most commonly predictive for females included peer alcohol use, parental permissiveness toward teen alcohol use, susceptibility to peer pressure and alcohol misuse in the past year.

"Some of the measures used may be indicators of the individuals' risk level and their susceptibility to crash involvement," Bingham said.

"Other variables, such as alcohol misuse, may contribute directly to increased risk of being involved in a motor vehicle crash, as well. These characteristics might be used to identify teens who are at excess risk of being in a motor vehicle crash, or to tailor interventions to reduce their crash risk."

In all, Bingham and colleagues say their study provides strong evidence that graduated driver licensing programs nationwide should include greater restrictions on teen driving, especially with passengers, at night and on weekends. In addition, GDL programs should require stiff

penalties for underage drinking drivers by increasing driving restrictions or by extending the time of the restriction period.

More importantly, GDL programs, they say, should move toward policies and restrictions that take more than one driving condition or characteristic into account at a time.

Source: University of Michigan

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