

Study shows options to decrease risk of motor vehicle crashes for adolescent drivers

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Motor vehicle crash rates for adolescents are highest during the transition from permit holder to licensed driver. Credit: University of Alabama at Birmingham

Adolescents who receive comprehensive and challenging on-road driving assessments prior to taking the license test might be protected from

future motor vehicle crashes, according to a University of Alabama at Birmingham study published in the *Journal of Adolescent Health*.

Motor vehicle crashes are the leading cause of death for adolescents in the United States and are caused largely by practical inexperience with driving, and developmental features of adolescence.

The on-road driving assessment administered to study participants at the end of the learner's permit period reduced adolescents' crash risk by an estimated 53 percent compared to the group of participants who did not receive the assessment. Being assigned to take the assessment was also associated with increased practice quantity and situational diversity during the learner's permit period.

"Experiencing diverse and challenging driving situations during the learner's permit period could help decrease adolescents' risk of experiencing motor vehicle crashes during the first years of independent driving," said Jessica Mirman, Ph.D., assistant professor in the UAB College of Arts and Sciences Department of Psychology. "Adolescents need high-quality and appropriately challenging learning opportunities during the learner's permit period to prepare them for the myriad risky scenarios they will face as licensed drivers. Driving practice that is much too easy, is much too hard or is too infrequent is unlikely to be helpful."

Motor vehicle crash rates for adolescents are highest during the transition from permit holder to licensed driver. Informed by these population-level crash data, graduated driver licensing policies were created to phase adolescents into licensure by providing an opportunity to build practical driving experience during a formal period for supervised driving prior to licensure.

Many states also restrict newly licensed adolescents from higher-risk driving scenarios, such as driving with friends and driving late at night.

"Our current study suggests that parents should take advantage of their state's GDL policies and look for evidence-based interventions that can help adolescents gain critical real-world driving experience during the learner's permit period," Mirman said.

The experimental study evaluated the long-term effectiveness of two different interventions provided to families during the learner's permit period of GDL. A web-based intervention, the TeenDrivingPlan, was found to improve the the quality and diversity of parent-supervised practice driving by offering an interactive logging and rating tool, online practice tutorials, and an interactive practice planner for families; but it did not reduce post-license [crash](#) risk.

The comprehensive on-road driving assessment lasted about an hour and was administered at the end of the learner's permit period by a certified driver rehabilitation specialist in a dual-control vehicle. The assessment entailed taking adolescents through several different road environments, like highways, urban commercial districts, residential neighborhoods and rural roads, where adolescents faced challenges common to each type of roadway, like rural roads that had curves and elevation changes that require speed management and anticipating potentially unseen hazards.

The study assessment is much more challenging than a typical on-road license exam. Adolescents and their parents were provided with feedback at the conclusion of the assessment. The study found that the assessment experience was associated with an estimated 53 percent reduction in [crash risk](#) licensure compared to adolescents who did not take the assessment. While these results are promising, future studies are needed to determine whether this effect can be replicated.

More information: Jessica H. Mirman et al. Can Adolescent Drivers' Motor Vehicle Crash Risk Be Reduced by Pre-Licensure Intervention?, *Journal of Adolescent Health* (2017). [DOI:](#)

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