Improving Teen Driver Safety Through Partnerships

NJM Teen Driver Safety Report — 2022

NJM Insurance Group

Children's Hospital of Philadelphia

Brain Injury Alliance NEW JERSEY

Impact Teen Drivers

NJM's Teen Driver
Safety Programs

Motor Vehicle Crashes Remain a Leading Cause of Death for Adolescents.[1]

For over 100 years, NJM Insurance Group has focused on helping improve safety for commercial policyholders. NJM expanded its safety focus in 2010 to address motor vehicle crashes involving teen drivers. The facts surrounding teens and motor vehicle crashes are startling.

- Teen drivers age 16 to 19 are nearly three times more likely to be involved in a fatal crash than drivers age 20 years and older.
- Teens are at the highest risk of being involved in a car crash during their first 12 to 24 months of driving.
- The presence of even one teen passenger can nearly double a teen's risk of being involved in a fatal crash.

NJM understood that a novel approach to driver education would be necessary to improve teen driver safety. As a result, NJM partnered with the Brain Injury Alliance of New Jersey to become a founding sponsor of its U Got Brains Champion Schools Program. U Got Brains engages New Jersey high school students and teachers to develop public safety campaigns that address teen driving safety, increase awareness, and enforce safe driving behavior. Engaging teen drivers and their parents through research-based, data-driven programs has been NJM's focus ever since.

In 2013, NJM established its Consumer Safety Department to devote more resources to this issue. NJM also launched its classroom-based Teen Driver Safety Program, in which NJM Safety Officers presented an interactive curriculum on safe driving to New Jersey high schools. This early program was the first time NJM played a role in addressing teen driver safety through direct education of new drivers.

NJM further expanded its Consumer Safety Department in 2016 by naming a safety professional, Violet Marrero, to lead its teen safety efforts. Marrero previously worked for over a decade at the New Jersey Division of Highway Safety, where she provided strategic planning and oversight of a variety of driver safety programs.

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NJM's Teen Driver
Safety Programs

In 2017, NJM began offering Share the Keys at no cost to New Jersey high schools through a partnership with the New Jersey Motor Vehicle Commission. Share the Keys is a 60-minute, interactive program for teen drivers and their parents that encourages community involvement to help keep teen drivers safe. That same year, NJM once again teamed up with the Brain Injury Alliance of New Jersey to present a public service announcement (PSA) contest each year. The PSA contest allows high school students to compete for funding toward a post-prom, post-graduation, or safe driving program.

A partnership with Impact Teen Drivers, starting in 2020, allows NJM to offer both the PSA contest and Impact's program "What Do You Consider Lethal?" to students in Connecticut, Maryland, New Jersey, Ohio, and Pennsylvania. "What Do You Consider Lethal?" educates teens about the dangers of reckless and distracted driving.

In 2021, NJM announced its latest initiative, partnering with Children's Hospital of Philadelphia (CHOP), a natural progression of NJM's safety efforts. The partnership with CHOP introduces a new and exciting opportunity to reach young drivers and their parents in a primary health care setting. Given that motor vehicles crashes continue to represent a leading cause of death in adolescents, engaging with CHOP is an excellent opportunity to use the clinical and academic expertise of a respected health care provider to protect teens' health and safety.

Critical Reasons for Crashes Involving Teen Drivers

The overwhelming majority (75%) of serious teen driver crashes are due to "critical errors," with three common errors accounting for nearly half of these crashes[2]:

- Lack of scanning that is needed to detect and respond to hazards
- Going too fast for road conditions
- Being distracted by something inside or outside of the vehicle
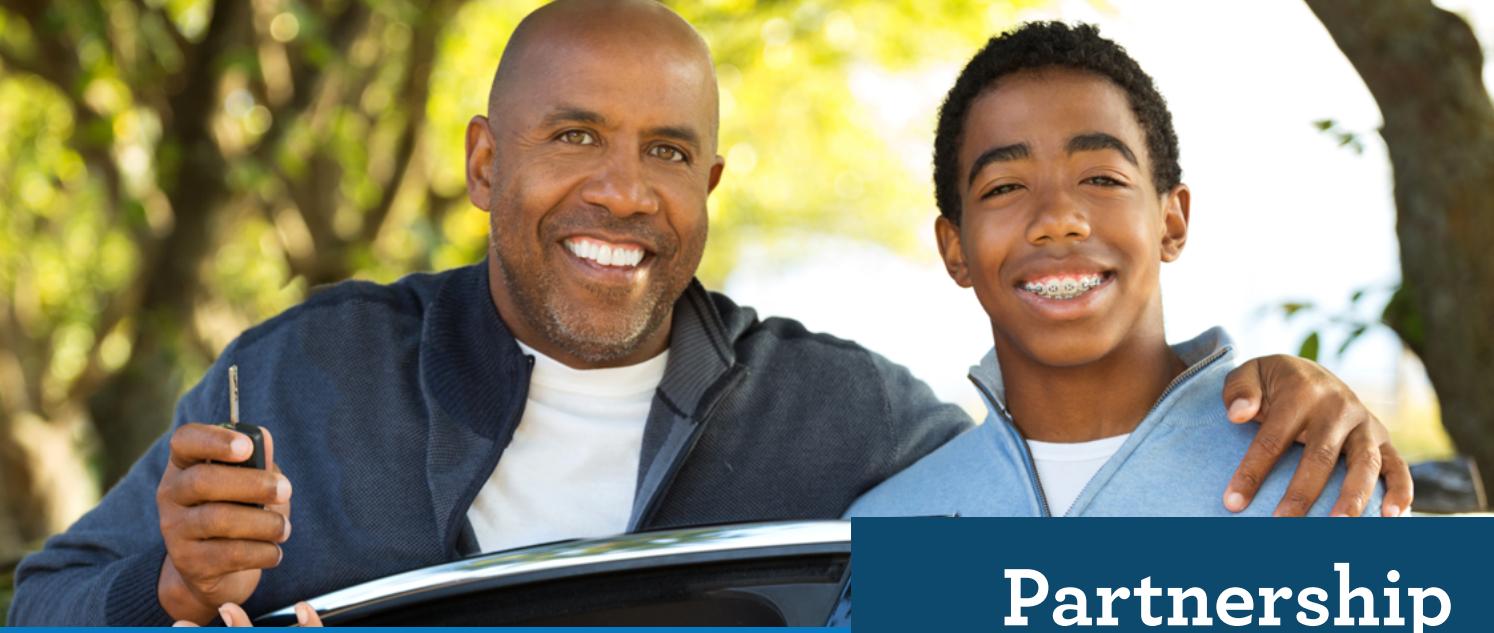
Partnership
Engagement

2010	▪ NJM partners with Brain Injury Alliance of New Jersey, as the founding sponsor of the Annual U Got Brains Champion Schools Program.
2013	▪ NJM establishes its Consumer Safety Department. ▪ NJM Consumer Safety Officers start delivering a classroom-based safety program in NJ schools.
2016	▪ NJM names a safety professional, Violet Marrero, as its Consumer Safety Director. ▪ The National Safety Council awards NJM with its Teen Driving Safety Leadership Award.
2017	▪ NJM offers Share the Keys at no cost to New Jersey high schools in a partnership with the New Jersey Motor Vehicle Commission (MVC).
2018	▪ NJM expands Share the Keys into Pennsylvania and invites students to become safety advocates through the "Just Drive" PSA Contest.
2020	▪ NJM partners with Impact Teen Drivers to expand its Programs into Connecticut. ▪ NJM extends the reach of Share the Keys and "What Do You Consider Lethal?" with online presentations.
2021	▪ NJM launches an innovative partnership with CHOP, kicking off the virtual driving assessment (VDA) at select CHOP Primary Care locations in Pennsylvania and New Jersey. ▪ NJM's Teen Driver Safety Programs expand into Maryland and Ohio.
2022	▪ The National Safety Council honors NJM's Consumer Safety Director, Violet Marrero, with the Marion Martin Award for her contributions to the field of safety.

Today, NJM's programs have reached more than **1.2 million** parents and teens in Connecticut, Maryland, New Jersey, Ohio, and Pennsylvania. The company's efforts have repeatedly been recognized by the National Safety Council. The future looks bright for identifying and collaborating with additional partners to expand NJM's teen safety initiatives.

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Advancing the Future of Teen Driver Safety — Research and Innovation

CHOP's Center for Injury Research and Prevention (CIRP) has a reputation for rigorous research that has informed program and policy implementation for teen driving safety for nearly two decades.

In June 2021, NJM kicked off an innovative partnership with CHOP aimed at preparing teenagers to drive safely. The virtual driving assessment (VDA), now offered at many of CHOP's primary care practices, provides teens with a comprehensive evaluation of real-world driving skills in a safe, controlled environment. Since 2017, alongside the Ohio Department of Public Safety (ODPS), CHOP has been assessing the skills of young drivers using its VDA technology in Ohio Licensing Centers.[3]

"It's evident that VDA data will inform future innovation in how young drivers are trained and licensed," said Violet Marrero, Consumer Safety Director at NJM. "We look forward to expanding the research at the heart of our programs to improve teen driver safety outcomes."

With funding support from NJM, CHOP researchers were able to link the VDA data to ODPS's licensing and crash databases. The data revealed important patterns and relationships between Graduated Driver Licensing restrictions, driver performance on the VDA at the time of licensure, driver license exam results, and police-reported crashes during the first year of driving. *(Read more on page 5.)*

With a focus on improving health equity, CHOP researchers are also exploring how a person's local access to driver training may impact their driving skill, licensing outcomes, and crash risk.

Origins of the VDA

The Virtual Driving Assessment (VDA) is built on a decade of research that resulted in a tool to safely and reliably assess driving skills in common, serious crash situations. Through a CHOP spin-out, Diagnostic Driving, Inc., the software was developed for delivery on readily available hardware and to automatically rate driving skills and provide personalized feedback. This innovative assessment is powered by Ready-Assess™, a self-guided software program that systematically exposes drivers to the nation's most common, serious crash scenarios (as defined by research) in a 15-minute virtual drive around town.

The first application of the VDA in the Ohio Bureau of Motor Vehicles (OBMV)'s licensing centers demonstrated its ability to predict performance on the on-road examination (ORE) as well as crash risk.[3]

Learn More:

Diagnostic Driving, Inc.

Ready-Assess™

Simulated Driving Assessment

Virtual Driving Assessment (VDA)

Teens Who Learn to Drive with Mandatory Driver Education Crash Less Than Exempt Peers

Using the Ohio licensing and crash dataset, CHOP researchers found a relationship between age-related license policy and reduced crashes post-licensure.[4] In Ohio, new drivers licensed before age 18 are subject to a comprehensive driver licensing policy that includes behind-the-wheel training and typical Graduated Driver Licensing (GDL) restrictions. New drivers subject to these requirements, such as nighttime driving and passenger limits, were less likely to crash than drivers licensed at age 18 exempt from these requirements. Compared with drivers licensed at age 18:

- Those licensed at age 16 had 27% lower crash rates over the first two months and 14% lower crash rates over the first year after getting licensed.
- Those licensed at age 17 had 19% lower crash rates over the first 2 months and 6% lower crash rates over the first year after getting licensed.

Despite conventional wisdom, age may not be the primary predictor of crash risk. Teenagers licensed at age 16 had the lowest exam failure and crash rate of all drivers under the age of 25. Less than 1% of applicants 18 or older had completed driver training at the time of their first license application, suggesting that education has notable effects on outcomes for young drivers.

Ohio Failure Rates for First Licensing Exam by Age

Ohio Average Crash Rates by Month After Licensure
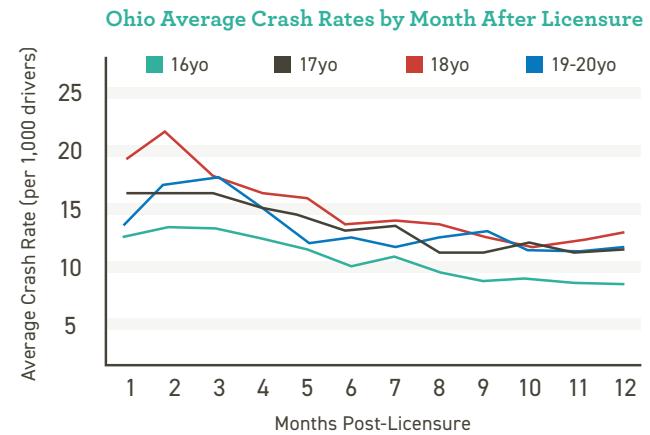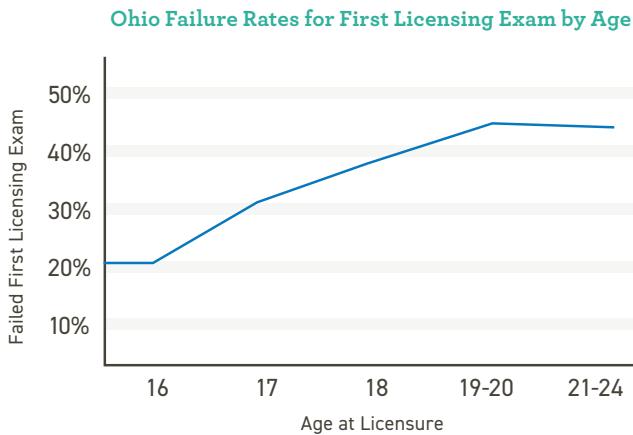
For every month in the learner permit stage, there was a 2% reduction in crash rates when the researchers controlled the study for other factors. Regardless of age, those living in the lowest 10th percentile socioeconomic status (SES) neighborhoods had higher crash rates and were more likely to fail their first on-road driving exam. This difference may be associated with the cost of behind-the-wheel training, testing, and obtaining a license in Ohio.

CHOP-NJM
Partnership

VDA Identifies Drivers Who Lack the Driving Skills to Avoid Crashes

In another recent study,[5] CHOP researchers used the VDA data to create a set of distinct driving skill clusters that represent driving performance in vehicle control, braking, acceleration, and tendency to speed or tailgate. They then grouped results within the driving skill clusters into 4 driving classes:

1. no issues (careful and skilled drivers)
2. minor issues (minor vehicle control deficits)
3. major issues (moderate vehicle control issues, risk-taking tendencies)
4. major issues with dangerous behaviors (high vehicle control issues, reckless behavior, high risk-taking tendencies)

The youngest drivers, who are subject to Ohio's mandatory driver education, including behind-the-wheel training and GDL restrictions, were more likely to belong to the "no issues" and "minor issues" driving classes. The findings suggest that the VDA is helpful in identifying new drivers who lack critical driving skills necessary to avoid crashes. This may help to reduce some of the age disparities identified in Walshe et al. (2022).[4]

Providing VDA Services Through Primary Care

NJM's partnership with CHOP allows CHOP researchers to pilot the delivery of the VDA to teen patients during a CHOP Primary Care Network acute or well visit. Since June 2021, CHOP has implemented this first-ever program in 11 locations in Pennsylvania and New Jersey, reaching more than 1,800 adolescent patients. All participating teens receive personalized feedback on their crash-avoidance skills, including tips to improve and links to videos created by CHOP experts to develop specific driving skills.

Implementation is led by the CHOP Possibilities Project, which is reimagining pediatric care delivery to improve patient health outcomes. The VDA has undergone several iterations to make the current process seamless for clinical staff and patients. The whole process of completing the assessment takes just 15 minutes for the patient, but its insights can have lasting implications for the patient's driving safety.

CHOP is now ready to implement the VDA in 11 additional Primary Care locations this fall and winter. Once fully operational across the CHOP Primary Care Network, researchers plan to measure the program's impact on licensing and crash data among young people in New Jersey and Pennsylvania.

Learn More

Learn More About NJM's Teen Driver Safety Programs and Our Partners

- NJM Teen Driver Safety
- Practice Driving Tips for Parents
- Teen Driver Source (CHOP)
- TeenDrivingPlan on YouTube

- Impact Teen Drivers
- Brain Injury Alliance of New Jersey
- Research in Action: Assessing Young Drivers in Primary Care
- NJM and CHOP: Advancing Teen Driver Safety

Footnotes:

[1]Cunningham, R. M., Carter, P. M., & Walton, M. A. (2018). The major causes of death in children and adolescents in the United States. New England Journal of Medicine, 386, 2468–2475. https://doi.org/10.1056/NEJMsr1804754

[2]Curry, A. E., Hafetz, J., Kallan, M. J., Winston, F. K., & Durbin, D. R. (2011). Prevalence of teen driver errors leading to serious motor vehicle crashes. Accident Analysis & Prevention, 43(4), 1285–1290. https://doi.org/10.1016/j.aap.2010.10.019

[3]Winston F.K., Kandadai V., & Hill S.D. (2019). Ohio portable driver simulation system pilot: Implementation of a virtual driving test within Ohio's driver licensing workflow (Research Brief). Philadelphia, PA. Children's Hospital of Philadelphia Research Institute. https://injury.research.chop.edu/sites/default/files/documents/ohio_pdss_research_brief_final.pdf

[4]Walshe, E. A., Romer, D., Wyner, A. J., Cheng, S., Elliott, M. R., Zhang, R., Gonzalez, A. K., Oppenheimer, N., & Winston, F. K. (2022). Licensing examination and crash outcomes postlicensure in young drivers. JAMA Network Open, 5(4). https://doi.org/10.1001/jamanetworkopen.2022.8780

[5]Walshe, E. A., Elliott, M. R., Romer, D., Cheng, S., Curry, A. E., Seacrist, T., Oppenheimer, N., Wyner, A. J., Grethlein, D., Gonzalez, A. K., & Winston, F. K. (2022). Novel use of a virtual driving assessment to classify driver skill at the time of licensure. Transportation Research Part F: Traffic Psychology and Behaviour, 87, 313–326. https://doi.org/10.1016/j.trf.2022.04.009