

Designing for Older Road Users



As drivers age, the following physical and cognitive changes tend to occur:

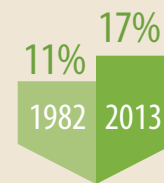
- **Physical capabilities weaken.** Hearing, muscle tone, reaction time, and vision (especially at night) decline.
- **Fragility increases.** The same crash may result in more serious injuries to a 65-year-old than an 18-year-old.
- **Cognitive capabilities can decline.** Driving is a complex activity requiring cognitive skills that can diminish with age.
- **Many older drivers use medications.** These may be necessary to address health conditions, but also may cause drowsiness or otherwise affect driving.
- **Depth perception, slow speeds.** Older drivers may exhibit risky behaviors such as driving slower than prevailing traffic or failing to accurately judge the speed of an oncoming vehicle at intersections.

According to the National Highway Traffic Safety Administration's (NHTSA) 2015 "Traffic Safety Facts: Older Population":¹

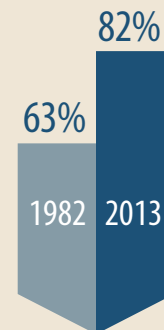
- In 2015, **6,165** people 65 and older were killed in traffic crashes in the United States, **18%** of all traffic fatalities.
- The population among the 65 and older age group increased by **29%** between 2006 and 2015.
- For older pedestrians, **68%** of fatalities in 2015 occurred at non-intersection locations.
- Older motorcyclist fatalities more than **doubled** between 2006 and 2015.

In 2015 older driver fatalities (65 or above) increased by 8.8% as compared to 2014.²

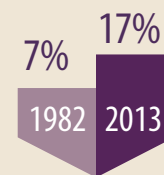
What We Know About Older Driver Trends³



The number of older drivers on the road is increasing.



More older drivers are holding onto their license and continuing to drive.



Older driver fatality rates are increasing faster than other age groups.

If the licensure rate remains the same, by 2030 there will be nearly twice as many older drivers in the United States as there are today.

¹ National Highway Traffic Safety Administration, *Traffic Safety Facts 2015 Data: Older Population*, DOT HS 812 372 (Washington, DC: February 2017). Accessible at: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812372>.

² National Highway Traffic Safety Administration, *Traffic Safety Facts 2015 Motor Vehicle Crashes: Overview*, DOT HS 812 318 (Washington, DC: August 2016). Available at: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812318>.

³ National Highway Traffic Safety Administration, *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices*, Eighth Edition, 2015, DOT HS 812 202 (Washington, DC: November 2015). Accessible at: http://www.ghsa.org/sites/default/files/2016-12/812202-CountermeasuresThatWork8th_0.pdf.

HELPFUL RESOURCES

In order to address older driver safety concerns, practitioners implement design solutions for infrastructure issues, and develop training and education to improve road user behavior.

Infrastructure Resources

- **Clearinghouse for Older Road User Safety (ChORUS).** ChORUS is a centralized source of information on highway safety for aging drivers, passengers, pedestrians, and cyclists. Built as a comprehensive resource, it covers all three major components of highway safety: *safe roadways, safe road users, and safe vehicles.*⁴
- **FHWA Office of Safety – Older Road Users Program.** This program addresses the engineering aspects of highway safety with respect to older drivers. *The Engineering Guidance and Training* section in particular provides an exhaustive list of guides, desk references, manuals, and workshops.⁵
- **FHWA Webinar: Designing for Older Road Users.** This session, conducted in 2014, focused on how streets and highways can be designed to better meet the needs of older road users.⁶



Looking to the Future

There is one technology that holds significant promise for the aging population: **Autonomous Vehicles.**

The prospect of self-driving cars could reduce the risks associated with aging.

Autonomous driving technology has the potential to transform life for the elderly, who are often unable to drive as frequently as desired.

Educational Resources

- **American Automobile Association (AAA) – Senior Driving.** This webpage contains an extensive list of training programs and brochures designed to improve the driving skills of older drivers.⁷
- **Roadwise Review Online.** This is a free screening tool developed by AAA to help seniors measure certain mental and physical abilities important for safe driving. In as little as 30 minutes, an older driver can identify and receive further guidance on the physical and mental skills that need improvement.⁸
- **National Aging and Disability Transportation Center (NADTC).** The goal of this organization is to promote the availability and accessibility of transportation options for older adults, people with disabilities, caregivers, and communities.⁹
- **Driver Improvement Courses For Seniors.** AAA's Roadwise Driver™ can be taken online or in a classroom to help older drivers refresh their driving knowledge and get the most out of their vehicle while reducing risk to drivers, passengers, and others on the road.¹⁰
- **CarFit.** CarFit is an educational program, sponsored by AAA, AARP and the American Occupational Therapy Association (AOTA), that offers older drivers the opportunity to check how well their personal vehicles fit them. This program also provides information and materials on community-specific resources that could enhance their safety as drivers, and/or increase their mobility in the community.¹¹

4 Roadway Safety Foundation, "Clearinghouse for Older Road User Safety (ChORUS)," 2017. Available at: <https://www.roadsafeseniors.org/>.

5 Federal Highway Administration, Office of Safety, "Older Road Users," last modified: February 28, 2017. Available at: https://safety.fhwa.dot.gov/older_users/.

6 University of North Carolina Highway Safety Research Center, Pedestrian and Bicycle Information Center, "Designing for Older Road Users," last modified: November 20, 2014. Available at: http://www.pedbikeinfo.org/training/webinars_FHWA_112014.cfm.

7 AAA Senior Driving, "All Available Resources," 2017. Available at: <http://seniordriving.aaa.com/tools-additional-resources/>.

8 AAA Foundation for Traffic Safety, Resources, "Roadwise Review Online," Available at: <https://www.aaafoundation.org/roadwise-review-online>.

9 Federal Transit Administration (FTA), "National Aging and Disability Transportation Center (NADTC)," 2017. Available at: <http://www.nadtc.org/>.

10 AAA Senior Driving, Maintain Mobility & Independence, "Driver Improvement Courses for Seniors," 2017. Available at: <http://seniordriving.aaa.com/maintain-mobility-independence/driver-improvement-courses-seniors/>.

11 CarFit, "Helping Mature Drivers Find Their Safest Fit," 2017. Available at: <https://www.car-fit.org/>.