

# TENNESSEE SAFE ROADS FOR SENIORS



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# Objectives

- Describe the anticipated growth of seniors and Driving Rules for Older Drivers
- Describe the aging process and factors that can impact driving safely
- Outline how collaboration and planning are needed to provide alternatives to seniors when they age out of their cars
- Outline the role of Occupational Therapists to assess and provide support to seniors as part of the Tennessee Safe Roads for Seniors Initiative



## Background: Silver Tsunami

- Anticipated population growth of seniors in Tennessee  
By 2030 - state average 22% with projections
  1. 65 counties may have between 20% and 30%
  2. 21 counties will have as much as 42% (mostly rural)**Nationally:** 10,000 baby boomers turn 65 daily; 1 in 5 drivers
- State by State Look at Driving Rules for Older Drivers
  1. Currently, 20 states renewals do not have requirements for older drivers
  2. Oregon – vision screening for drivers 50 and over
  3. 8 yrs. no restrictions: DE, MS, NY, TN, and WI



# Who are the Riskiest Drivers?

The youngest and oldest drivers have much higher rates of highway crashes and deaths (2008 government mileage data)

- 1.** Drivers, age 16-17, are involved in more crashes.  
9 times higher than middle aged drivers
- 2.** Fatality rates rise steeply for those drivers over 65.  
People 80 and over are involved in 5.5 times as many fatal crashes per mile driven as middle-aged drivers
- 3.** Drivers older than 80 being the most vulnerable



# GDL: Teen Restrictions

- During the 1990s, many states began enacting GDL laws. The programs and types of restrictions vary from state to state. Below are some highlights:
- **STAGES: Learner, Intermediate, and Full Privilege**
  1. **Cell Phones/Texting:** 38 states and D.C. ban all cell phone use by novice drivers.
  2. **Nighttime Driving Restriction:** All states except Vermont restrict night time driving during the intermediate stage.
  3. **Passenger Restriction:** 46 states and D.C. restrict the number of passengers during the intermediate stage.
  4. **Novice Driver Decal:** New Jersey is the only state with a measure requiring those younger than 21 without full-privilege licenses to display a decal on their vehicle identifying them as new drivers.



# Factors that Impact Driving Safely

- Physical changes: Loss of vision, hearing, flexibility, muscle strength, mobility, coordination (unbalanced, **increase in falls, shuffles when walking**)
- Cognitive changes – Dementia, Alzheimer's
- Neurological Conditions – deterioration over time (walking, muscle strength, and coordination)
- Increased number of prescription medications
- Increased fragility and frailty (increase in fatalities)
- Changes in attention and reaction time
- Progression of disease – diabetes, arthritis, Parkinson's, **Stroke**

Source: NIH Senior Health Website



# Situations of Greatest Concern

- Stops at all stop signs and looks both ways to check for cross traffic
- Stops at red lights
- Appropriately yields the right-of-way
- Responds properly to other vehicles, motorcyclists, bicyclists, pedestrians, and road hazards
- Merges and changes lanes safely
- Stays in the lane when driving straight and making turns (especially left turns)
- Is not having trouble moving the foot between the gas and the brake pedals, or confusing the two
- Source: <https://nihseniorhealth.gov>



## Senior Shuffle & Pedal Mixups

- Occurs in confined spaces: “parking lot, traffic jam, drive-thru or in a place where idle speed is sufficient to complete the chosen maneuver” Source: Zoomer, August 15, 2012.
- Physician – leg numbness may be the reason for the confusion -the senior hits both the gas and the brake at the same time (warning –gas pedal wins)
- Shuffling – harder to lift the leg to hit the brake pedal(usually is higher than the gas pedal)



## Solutions for Pedal Mix Ups

- Purchase the right vehicle –one that does not have the brake pedal mounted higher than the gas pedal (problem with bigger domestic vehicles)
- Imported cars from Asian countries mount the brake and gas pedals at the same height (still a problem because the gas pedal wins if both are pressed).



# Manufacturers Recommendations

- Best cars for older drivers (consumer reports): access, visibility, front-seat comfort, driving position, and controls.
- Controls with larger buttons and more readable labels
- Lane departure warnings
- Rear back-up cameras, blind spot detection, small convex mirrors
- Cross traffic alerts to warn drivers of surrounding traffic for lane changing
- Big door and chair height access
- Roof pillars and smaller windows are a problem



## Other recommendations

- Department of Transportation: make signs more visible and easily understood
- Make signs more reflective
- Use larger font, upper and lower case letters
- Increase distance between signs and exits
- CarFit program – AAA, AARP, and AOTA: helps older drivers to assess the following – seat position, head restraints, mirrors, and controls (maximize the safety features of their car)



# Vision Problems Due to Stroke

- Hemianopsia is a vision problem that occurs due to a stroke; the vision field is cut in one-half in each eye. This is what left homonymous hemianopsia looks like.
- Can the individual with this vision drive a vehicle safely?



# Role of OT and the CDRS

- Screen, assess, and evaluate drivers for the determination of fitness to drive
- Occupational therapists are trained healthcare professionals who specialize in helping people live more independent and productive lives.
- OTs help clients perform daily functions. They are focused on improving life skills and often involve adaptive tools that lead to better quality of life.
- OT's who are CDRS can provide the necessary support and training to help seniors drive safely



## TN Safe Roads For Seniors

- Purpose: Work with OT's who are CDRS to screen, assess and evaluate identified senior drivers from referrals
- “Problems arise when seniors lose their cognitive and physical abilities. The challenge is coming up with a system to identify drivers who are unsafe to drive”. “It is far too expensive and potentially biased to set an age limit and say everyone must be tested.”  
Source: Eby, University of Michigan.
- Assessment: vision, cognitive state, and observation of driving skills for the determination of fitness to drive
- Provision of education/training to help seniors drive safely



# TN Safe Roads For Seniors

- **Expected outcomes:** Research to determine what factors contribute to making a senior drivers unsafe to drive. Currently one half of participants have had to terminate driving.
- **Education:** DMV, law enforcement and physicians
- **Alternative transportation** – rural areas are greatest concern



# Tennessee Safe Roads for Seniors

- Western Tennessee – rural counties
- Senior Driver Assessment: Vision, Cognition, and Driving Test with a CDRS
- Preliminary results: Ugly, Bad and the Good
- Perception is viewed as taking away an individuals right to drive



## Lessons Learned – Ugly Bad, and Good

- Perception is viewed as taking a “right” away versus a privilege and others
- Viewed negatively by decision makers, physicians, and seniors
- Should it be left up to the individual states? Currently 28 states plus DC have special provisions for license renewals (more frequent renewals, restrictions for on-line and mail renewals, and vision or road tests).



## **Lessons Learned – Ugly Bad, and Good**

- Taking away the right to drive may impact the senior socially
- Cost of testing is prohibitive and insurance won't pay for driving related testing
- There are limitations to alternative transportation especially in rural counties



## **Lessons Learned – Ugly Bad, and Good**

- Seniors self-regulate and additional training, resources, and assistance are available (AAA, AARP, CarFit)
- Research project will reduce costs for testing by providing parameters that can serve to identify who and what health conditions make a driver unsafe to drive
- Information can be used by others to encourage better collaboration and planning to better meet the needs of senior drivers (physicians, law makers, auto makers, transportation, DMVs, MABs)



## Additional Sources

- TN senior population data – TN Department of Health
- Riskiest Drivers – Consumer Report – 10/2012
- Teen Driver GDL Information – GHSA
- Factors that affect senior driving
- Pedal Mix ups - Steve Wallace. Zoomer, August 15, 2012
- Vision Problems Due to Stroke – [www.stroke-rehab.com](http://www.stroke-rehab.com)



## Helpful Resources

- **AAA Roadwise Driving Self Test** This is a AAA print(PDF) introduction to their online driving assessment. It explains the online self-tests for vision, and other functions related to safe driving. The actual online assessment gives a printed report that can be discussed with your parent's doctor.

**<http://seniordriving.aaa.com/evaluate-your-driving-ability/>**

- **Warning Signs for Older Drivers Checklist** This is a checklist developed by The Hartford Insurance Company that gives an extensive overview of signs that your aging parent's driving is becoming impaired. You can use it to watch for changes over time.

**<https://www.thehartford.com/resources/mature-market-excellence/publications-on-aging>**



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