

Driving Across the Life Span MEGAN FRAZIER, MS, OTR, DRS

### Who am I?

- An OT and Driver Rehab Specialist
- Practicing for 15+ years
- Owner of Functional Stability and Mobility, LLC
- Vic-President of ADED Texas Chapter and Co-Chair of TOTA's new Driving and Community Mobility SIS
- I LOVE to travel, spend time with my family, and spending time out on our land.





Why Driving and Community Mobility?

- Underserved population
- Maximizes independence & promotes engagement with the community
- Reduces depression, isolation & onset of more complex medical conditions
- It's a fun, dynamic & individualized to each client
- Involves collaboration with a wide variety of professionals
  - Emerging practice area



# What are today's objectives?

- Identify why addressing driving as an IADL across the life span is important
- Identify the cognitive, physical, and social components needed for driving safety
- Cite 3 clinical assessments that assess cognitive and physical skills needed for driving
- Understand Texas state driving laws that govern restrictions for driving based on medical needs





# Why is driving an important IADL?

https://i.pinimg.com/564x/b4/0e/ad/b40eadd1677d579ccd128acc8e7eaa3c.jpg

Why is driving an important IADL? IADL: is an activity to support daily life within the home and community that require more complex interactions.

Driving & Community Mobility: planning & moving around in the community including the use of public & private transportation

The American Journal of Occupational Therapy. http://ajot.aota.org/



### Why is driving an important IADL?

"Driving is often one of these clients' most important IADLs (Dickerson, Reistetter, & Gaudy, 2013) and often underlies all their other occupations, including work, education, play, leisure, and social participation, as well as most of their other IADLs (e.g., shopping, health management, money management, caregiving) (Schold Davis, Dickerson, Dellinger, & Chodrow, 2016)."

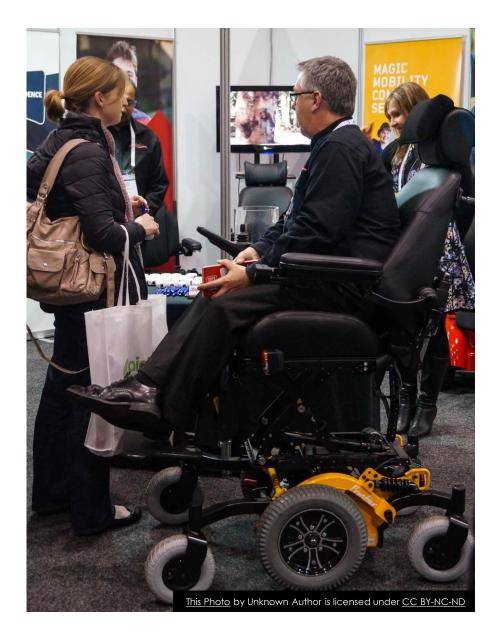




### Why is driving an important IADL?







Driving & Community Mobility: Working at the top of our license! Why are OTs perfect for addressing driving & community mobility?



- Case law exists & sets a precedent for the professional obligation to warn clients based on the foreseeable likelihood of danger or harm due to an impaired client.
- OTs have an ethical responsibility to know the laws in their state that relate to their reporting obligations & options with impaired drivers.
- Referrals for driver rehab services or recommendations should not be influenced by ability to pay

Evidence-Based Consensus Statements for Driving and Community Mobility & the AOTA Occupational Therapy Code of Ethics (AOTA, 2015a)

# Texas Laws Regarding Driving

#### **Texas Reporting Guidelines**

Texas Department of Public Safety (DPS) is solely responsible for all actions taken with regards to licensing

#### Reporting

Texas does not have a mandatory reporting law, but OT/COTAs have an ethical duty to discuss driving

#### Protection

Release of information under Section 12.096 is an exception to the patient-physician privilege requirements imposed under Section 159.002 Occupational Code



### Liability

#### Our Role

Medical providers that report to the Medical Advisory Board under Section 12.096 is not liable for a professional opinion, recommendation, or report made under this subchapter.



#### Texas Medical Advisory Board (MAB)

#### Dictatorship of the Texas Department of State Health Services

- Group of 14 Physicians across various areas of practice
- Meets every 2 weeks
- No individual can appear before the MAB

### What does the MAB do?



Assists the DPS in determining whether applicants for driver's license are safe



Reviews medical facts & provides an opinion



Provides written recommendation to DPS



Uses the MAB Guide for Determining Driving Limitations

### Guide for Determining Driver Limitations



Texas Department of State Health Services

**Texas Medical Advisory Board** 

Texas Department of Star Bealth Services

Guide for Determining Driver Limitation

#### Goal

 Allow all who can drive to do so safely, and reduce the number & severity of MVAs

#### Functional Ability Profiles

 Complied 10 categories with 7 sub-categories with multiple levels under each profile



OT Practice Framework: Client Factors Needed for Driving

# Occupational Profile





https://www.aota.org/~/media/Corporate/Files/Practice/Manage/Documentation/AOTA-Occupational-Profile-Template.pdf

#### Vision

- Visuospatial Skills
- Speed of Processing
- Scanning
- Useful Field of View (UFOV)
- Peripheral Vision
- Visual Reaction
- Contrast Sensitivity
- Acuity
- Glare Recovery
- Visual Attention



#### Motor

- Range of Motion
- Reaction Time
- Psychomotor skills/Coordination
- Limb Strength
- Limb Sensation
- Trunk stability, proprioception & balance
- Muscle tone
- Muscle Endurance
- Gait



#### Cognition

- Attention/Divided Attention
- Concentration
- Speed of processing
- Insight/Judgement
- Mental Flexibility
- Memory
- Ability to Anticipate
- Orientation
- Problem Solving



#### Emotion

- Regulation
- Insight
- Lability

#### Values/Beliefs

- Reason for driving
- Goals for driving
- How Driving Retirement may affect them
- Family influence/Support level

#### Skin integrity



# Cognitive Frame of Reference: Michon's Model of Driving Behavior





# Which Cognitive Frame of Reference?

I had no idea what a three point turn is, so I just drove in a circle three times.



https://i.pinimg.com/originals/1b/88/80/1b8880fb94e460d463c4c80c6a829aa1.jpg

# Spectrum of Driver Rehab Services

OT Generalist	OT DRS/CDRS	Driving School
Applies knowledge of medical conditions with implications to driving	Same as OT Generalist	Instructs new or relocated drivers
Assess the cognitive, visual, perceptual, behavioral & physical limitations impacting performance	Same as OT Generalist	Limited or no training on medical or aging conditions that may interfere with driving
No In-Car training or evaluation	Integrate the clinical findings with assessment of on-road performance	Teach, train, refresh or update driving skills
Educate clients about role of DRS & start discussion about driving with a disability	Coordinate multidisciplinary providers & resources including equipment & vehicle modifications	Counsel family members for student driver skill development.





#### In the clinic

Understanding the role we play, recognizing warning signs, understanding how we can better assess to make recommendations, & incorporate deficits into our treatment plans.

# The OT-DRIVE Model



### The OT-DRIVE Model

OT-DRIVE offers a model to develop your plan for driving and community mobility and address client goals beyond the home so they can live life to its fullest.



# The OT-DRIVE model

SPECTRUM OF DECISION INDICATORS FOR DRIVING & COMMUNITY MOBILITY Risk Determination Based on Evidence and Clinical Judgment





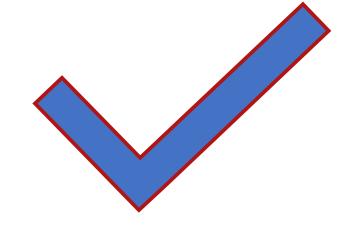
# The OT-DRIVE Model



- Developed to help practitioners understand how to apply their clinical knowledge & reasoning skills to the IADL of driving and community mobility for their older adult clients.
- IADL of driving and community mobility evaluation begins at the level of client factors of visual, sensory, motor, and cognitive function
- Helps clinicians work "at the top of their license"
- Guide practitioners to fulfill their duty to address driving as an IADL & to develop a plan that will prioritize the health and safety of the client and community

OT-DRIVE: Integrating the IADL of Driving and Community Mobility Into Routine Practice

OT-DRIVE: Integrating the IADL of Driving and Community Mobility Into Routine Practice





Assessment Tools to Assess Driving

# Assessments & Clinical Exam

"To date, no single cognitive test has been demonstrated to be an accurate predictor of <u>no-road driving ability</u>"

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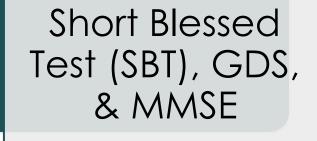
"A RECENT SYSTEMATIC REVIEW demonstrated good correlation between driving ability and tests of attention, visuospatial cognition and executive function."

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### Standardized Cognitive Assessments



Montreal Cognitive Assessment (MoCA)

Brief Cognitive Assessment Test (BCAT)



### Cognitive Assessment: Screening Tools

#### SBT

Refer to DRS score 6+. Driving Retirement with score 10+

#### GDS

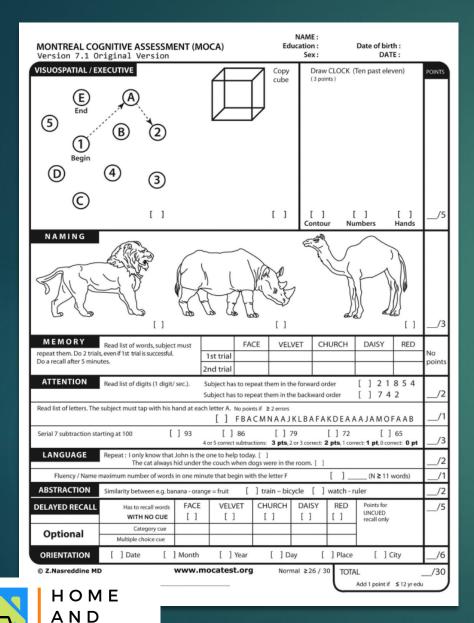
Refer to DRS score below 3. Driving Retirement with scores

5-7

#### MMSE

Referral to DRS with a score below 28. Some studies indicate a score below a 24 is unsafe to drive (McGuire & Schold Davis, 2012)





DRIVING

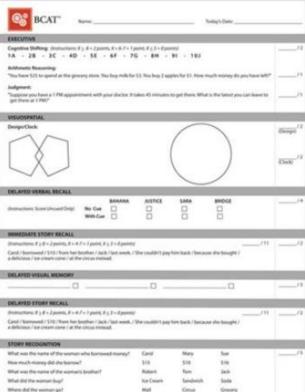
### Cognitive Assessment: MoCA

- Training required & fee for use
- Available in multiple languages
- Tests visual perceptual skills, executive functioning & abstraction, object & delayed recall, attention & orientation, & language
- Normative data linking test performance to MCI & Dementia
- Widely used by physicians
- Scores of 18 or less should consider driving retirement. Scores less than 26 indicate referral to DRS.

#### Cognitive Assessment: BCAT

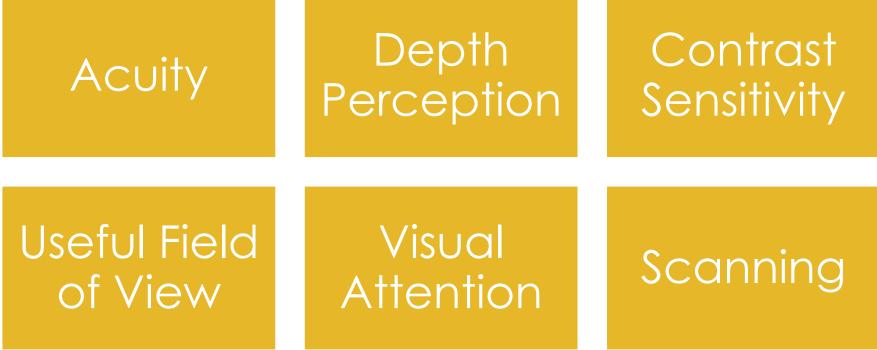
- Training required & yearly fee for use
- Tests orientation, verbal recall, visual recognition, visual recall, attention, abstraction, language, executive functions & visuo-spatial processing
- A referral for an In-Car evaluation is beneficial with a score below 44. Scores less than 24 should consider driving retirement.
- Able to print out results with explanation for client, family & other providers

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### Vision Screening





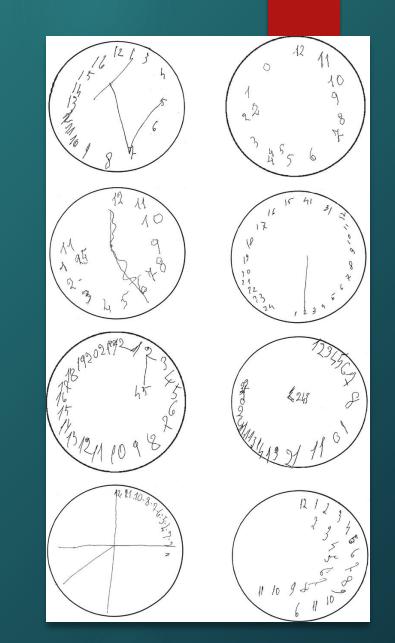
#### Visual Perceptual Assessments



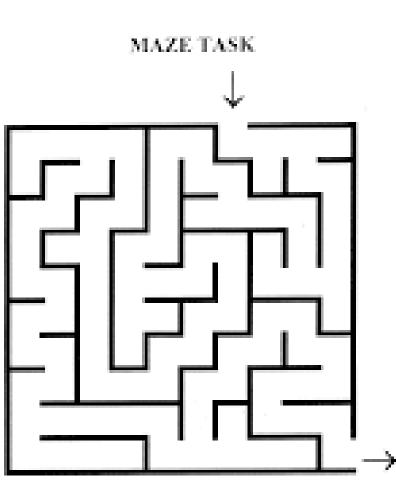


#### Visual Perceptual Assessment: Clock Drawing Test

- Screens long-term memory, short-term memory, visual perception, visuospatial skills, selective attention, abstract thinking & executive functioning skills
- Intervention could include referral to DRS
- Consider cause of errors









Visual Perceptual Assessment: Maze Test

- Multiple versions available
- Snellgrove Maze is a 1-page cognitive screen for driving competence that was validated with older adults with MCI
- Assesses attention, visuoconstructional ability & executive functioning skills

### Visual Perceptual Assessment: Trails Making Test Part A & B

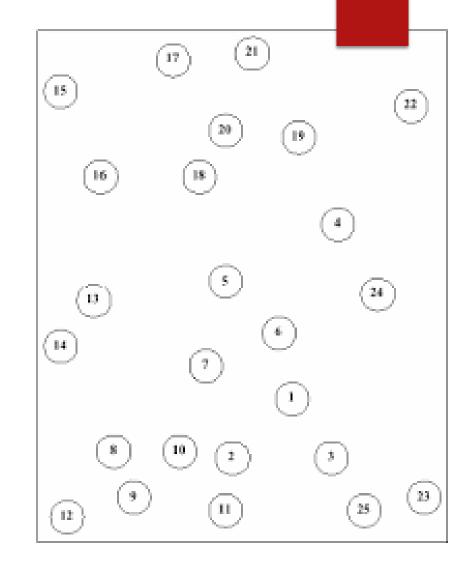
Assesses working memory, visual processing, visuospatial skills, selective & divided attention, & psychomotor coordination

# Numerous studies have linked poor performance with poor driving performance.



#### Visual Perceptual Assessment: Trails Making Test Part A

- Poor performance resulted in 4 times more likely to report a crash at follow-up by participants (Lesikar, S.E. et al. Prospective Study of Brief Neuropsychological Measures to Assess Crash Risk in Older Primary Care Patients. J Am Board Fam Pract 1591): 11-19, 2002.)
- ► Ave. 29 seconds; 0 errors
- ► 60 seconds is below normal





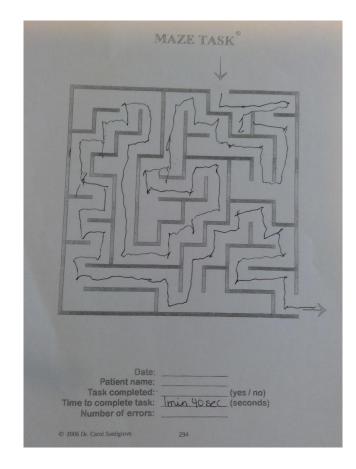
http://apps.usd.edu/coglab/schieber/psyc423/pdf/lowaTrailMaking.pdf

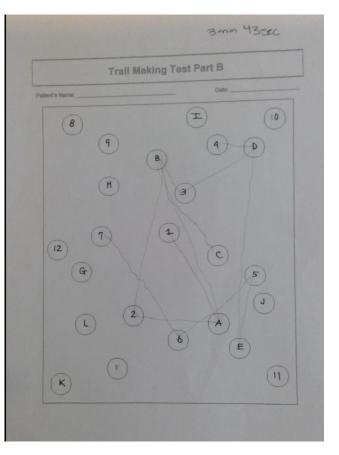
#### Visual Perceptual Assessment: Trails Making Test Part B

- Numerous studies have demonstrated validity of poor performance on test with poor driving performance
- Ave. 60-90 seconds; 0-1 errors
- 180 seconds with or without errors is abnormal

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# Client Samples:



### Visual Perceptual Assessment: MVPT

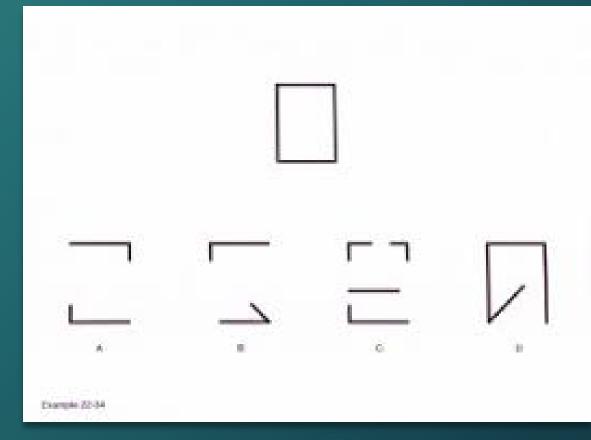


#### Available for purchase

- Standardized for 3 years old to older adults
- Assesses figure ground, spatial orientation, visual memory, visual closure, & processing speed
- Used mostly with CVA/TIA, Autism, ADD/ADHD/Dyslexia, TBI
- Below average on age norms recommend referral to DRS
- Pay special consideration to processing speed
   & visual closure

### Visual Perceptual Assessment: MVPT

- 3 or more errors on the visual closure section indicates a 3.75 times greater chance of an atfault accident
- 5 errors indicates client has nearly a 5 times greater chance of having an at-fault accident



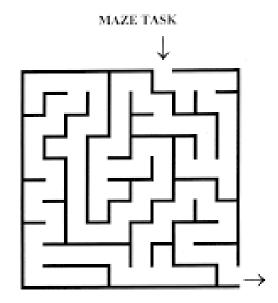


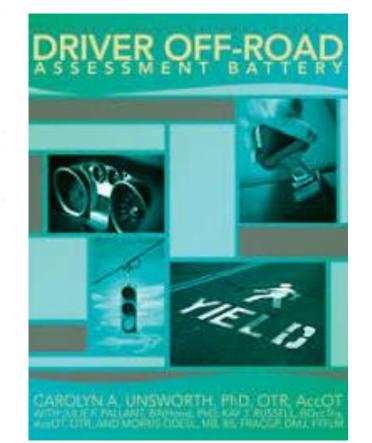


Visual Perceptual Assessment: (OT DORA) **OT Driver Off** Road Assessment Battery



- Battery of previously published assessments
- Available for purchase from the AOTA
- 90 minutes to administer
- Battery includes a thumb drive that contains two downloadable booklets
- Items needed include 2 chairs, a Snellen Vision Chart, a vision wand, stopwatch, an eye patch & blindfold, shoes, a ruler, a step box, a goniometer





Visual Perceptual Assessment: (OT DORA) OT Driver Off Road Assessment Battery



#### Other Visual Perceptual/Cognitive Assessment





#### Motor Assessments





### Adult Disability: Falls

Older adults who had fallen were <u>40 percent</u> more likely to experience a car crash after their fall than older adults who had not fallen.



#### Other Assessments





#### Self Assessments

Am I Safe Driver? Roadwise Review Safer Driver Survey

Driving Decisions Workbook Fitness to Drive Screening Measure



#### "Research

indicating the subjective and unreliable nature of self-report, caregiver report, and clinician judgment, there is a need for valid and reliable objective measures of neurocognitive functions to guide assessment of driving ability"



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### Additional Considerations

#### <u>Red Flags</u>

Consider medical conditions, medications, visual, cognitive, & motor changes

#### <u>Assumptions</u>

Do not make assumptions about how the client feels about driving & community mobility!

#### Age

Age alone is not a red flag. This is ageism & not evidence based.



Key to Successful Client Outcomes: Timely Referrals





A patient is independent with their ADLs & expresses interest in returning to driving after a medical complication.



The clinician feels that an On-Road Assessment is needed to determine safe driving skills & decision making.



The patient demonstrates decreased executive functioning skills despite having few physical limitations. How do you incorporate driving & community mobility into OUr practice?

Social Skills: Do they know how to...

- Interact with other drivers
- Interact with a police officer
- Respond to approaching emergency vehicles
- Respond if they get lost
- Manage their anxiety

How do you incorporate driving & community mobility into *'OUr* practice?

Motor Skills: Do they have the ability to...
Turn the steering wheel
Reach the necessary controls
Turn their head
Trunk strength & balance
Transfer in & out of vehicle

How do you incorporate driving & community mobility into ′OUr practice?

Cognitive Skills: Does the teen know...
Basic road signs
How to judge right of way
Know their right & left

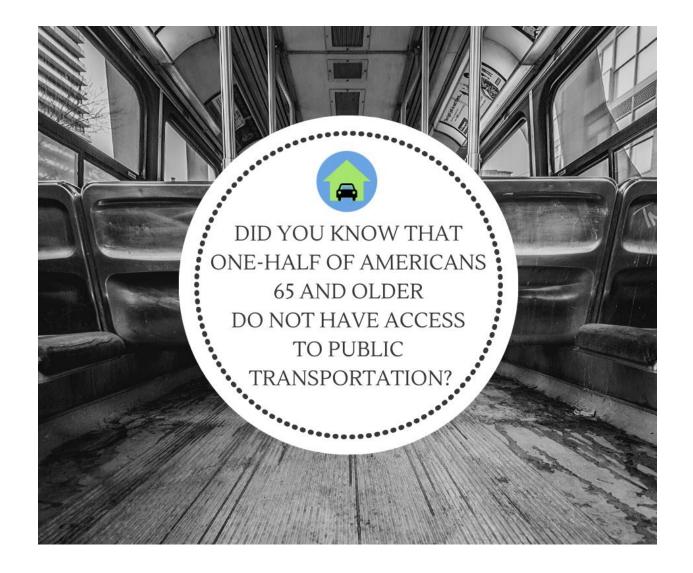
► How to read a map/follow GPS

Different parts of the car (ie. What the gas light means!!!)

#### How do you incorporate driving & community mobility into your practice?

- Temporary vs Long Term impairment
- Address immediate transportation needs
- ► Train caregivers
- Educate on options
- ► Transfers





Driving Retirement: Access Limits

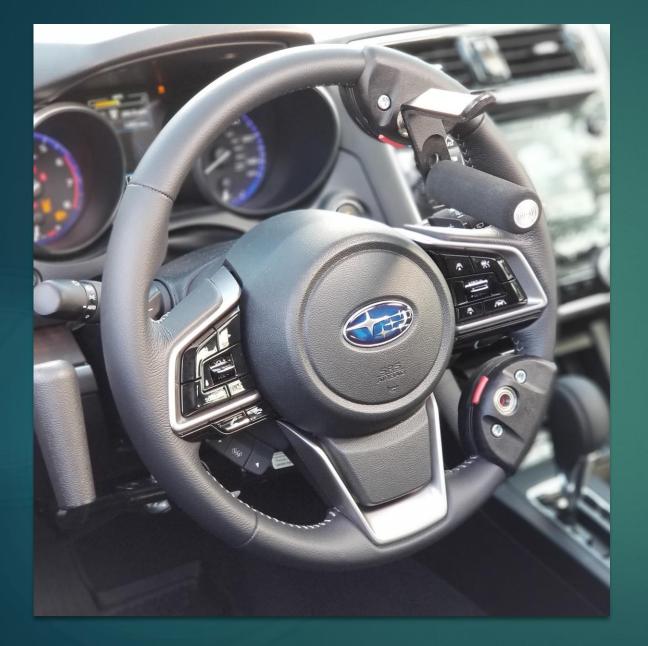
How do you incorporate driving & community mobility into your practice?

- Consider other ADL & IADL skills
- Be an advocate
- Help guide to next step
- Assist with collaborative care

#### Considerations for Clinic



- Complete Assessment of Readiness for Mobility Transition (ARMT)
- Does the client have the visual, cognitive, motor, & emotional skills needed to drive
- Help family & client develop a Driving Agreement
- Discuss possible vehicle modifications available if appropriate
- Develop goals to address pre-driving skills
- May be able to co-treat with Speech Therapy



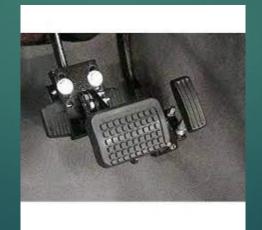
How do you incorporate driving & community mobility into your practice? CONSIDER ADAPTIVE EQUIPMENT, MODIFICATIONS, & ADAPTIVE DRIVING NEEDS

#### Common Adaptive Equipment













### Driving Retirement

A Driving Retirement Plan is an individualized plan to help an older adult maintain community mobility, participate in important life events, full fill daily needs such as accessing food, medication and doctors.

### Driving Retirement

What locations does the older adult need to visit?	What times of day do they need transportation?	How often will they need transportation? Will it be reoccurring?	What public & private transportation options are available in area?
What is the budget available for transportation?	Is there any physical or cognitive limitations to consider?	Is the transportation handicap accessible (walker, cane, wheelchair, etc)?	Will the older adult need assistance with transporting items (groceries, shopping bags, etc.)?





### Silver Alert



- A public notification system that is used to broad cast information about missing seniors to assist with their safe return
- Must meet ALL 6 criteria
- Commonly use commercial radio stations, television stations, electronic billboards, and cable TV
- Make sure that you have documentation from a medical provider stating the medical condition
- Create a profile

## Billing & Coding

#### CPT Code

- OT Evaluation 97003
- ► Follow Up Special Tests 96125
- ► Therapeutic Activities 97530
- ► ADL training 97535
- Community Reintegration 97537
- ► SNOMED-CT Code
  - ▶ 243883003

# Resources & Additional Training



### National Resources



American Occupational Therapy Association





The Association for Driver Rehabilitation Specialists





National Institute on Aging

### Organizational Resources

#### ► AOTA <u>www.aota.org</u>

- Association for Driver Rehab Specialists (ADED) <u>www.added.net</u>
- National Highway Traffic Safety Administration (NHTSA) <u>www.nhtsa.gov</u>
- ► AAA <u>www.aaa.com</u>
- AARP <u>www.aarp.org</u>
- Children's Hospital of Philadelphia (CHOP) <u>www.chop.edu</u>
- The Hartford Mature Market Excellence Program



# The Hartford Center for Mature Market Excellence





### Texas Resources







### Texas Resources





### CarFit: Become a technician!

- Program developed by AOTA, AAA & AARP
- Improve driver safety & comfort behind the wheel
- ► FREE event for clients
- Takes 20 minutes
- CarFit Technician Training FREE 5 CEUs with online training option



Helping Mature Drivers Find Their Safest Fit

The American Occupational Therapy Association, Inc.



AARP<sup>®</sup> Driver Safety



### Foundational Resources in Driving Rehab



- Clinician's Guide to Assessing & Counseling Older Drivers
- Driving Diagnosis Pathway Sheets
- Evidence Based Consensus Statements from AOTA and ADED
- Articles:
  - Stav, W. (2015) <u>Occupational Therapy Practice</u> <u>Guidelines for Driving and Community Mobility for Older</u> <u>Adults.</u>
  - McGuire, M.J., Schold Davis, E. (2012) <u>Driving and</u> <u>Community Mobility: Occupational Therapy Strategies</u> <u>Across the Life Span</u>.
  - Redepenning, S. (2006) <u>Driver Rehabilitation Across Age</u> and Disability: AN Occupational Therapy Guide

# Additional Professional Development



AOTA/ADED Specialty Certification

- ► AOTA (SCDCM) currently being revised
- ADED by exam (CDRS)
- Join TOTA Driving and Community Mobility SIS, AOTA Fit to Drive Community of Practice and/or ADED Texas Chapter
- Review articles, books & research
- Attend conferences
- Attend Adaptive Mobility Courses
- Find a mentor

### Resources @ Homeanddriving.com



#### Guide for Determining Driver Limitations

https://www.texmed.org/uploadedFiles/Current/2016\_Pu blic\_Health/MABDriverLimitationGuide.pdf

 Established by the Texas Medical Advisory Board (MAB)

Features rules for driving restrictions for those with medical conditions, such as seizures, dementia, sleep disorders, and cardiac disease
When a physician refers a patient case to MAB for evaluation, the board reviews the medical facts and reaches an opinion. At that time, the board forwards a written recommendation to the DPS Driver License Division, which informs the individual of the decision.

#### Liability

- A physician who reports to the medical advisory board or a panel under Section 12.096 is not liable for a professional opinion, recommendation, or report made under this subchapter.
- "Neither the MAB nor the attending physician are legally liable for the decisions or actions taken by DPS in the licensing or un-licensing of drivers."

FUNCTIONAL STABILITY & MOBILITY, FITNESS TO DRIVE PROGRAM SERVING ALL AREAS OF TEXAS en with regard to ensing.

Texas

Reporting

requirements imposed under Section 159.002,

> HONE (254) 290-3333 FAX (254) 300-9246



#### Learn More About Driving Retirement WHY

WHAT An individualized plan to help an older adult maintain community Pla mobility, participate in important fife events, full fill daily needs such as accessing food, medication and doctors, dd

Developing a "Driving Retriement Plan' will hep older aduits maintain their community independence and reduce risk to secondary side affects including depression and isolation.

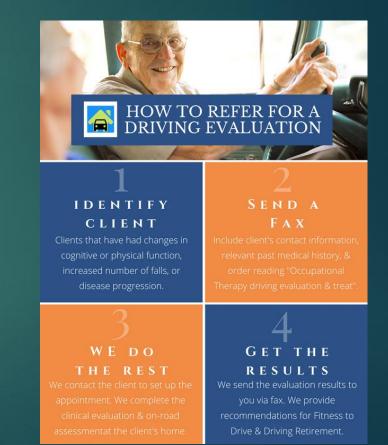




WHEN

A driving retirement plan will help you maintain social connections, decrease risk of entry into a long-term care facility, and maintain physical and mental health. *Fort*, you need to consider your transportation needs, physical limitations, cognitive limitations, available transportation options in your area, availability of family and friends to assist, and firansce available. *Second*, you need to make a list or chart that pairs the transportation option (i.e., public transportation) with the destination (i.e. doctor's office). *Finally*, you may need to consider how this plan carevole if you have further changes in your physical needs or cognitive limitations.

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# Learn More & Follow



We write & post weekly blog posts on our website for clients & clinicians on all aspects of driving across the life span. Visit our Facebook page for daily articles, posts, current speaking engagements, and additional resources.

# Last Thoughts: Now What?!

- Get Involved (CoP, SIS, advocacy)
- Host a CarFit Event
- ► Give a "We Need to Talk" Seminar
- Provide a Pre-Driving Skills Clinic
- Provide a clinic on using alternative transportation
- ► Give/Host a talk for other medical provides
- Talk to your clients & families about driving

# Questions/Comments





# Thank You! Contact Us

#### ► Website

www.homeanddriving.com

- ► Email
  - Megan@homeanddriving.com
- Phone
  - ▶ (254) 290-3333



