Identifying Medically At-Risk Drivers

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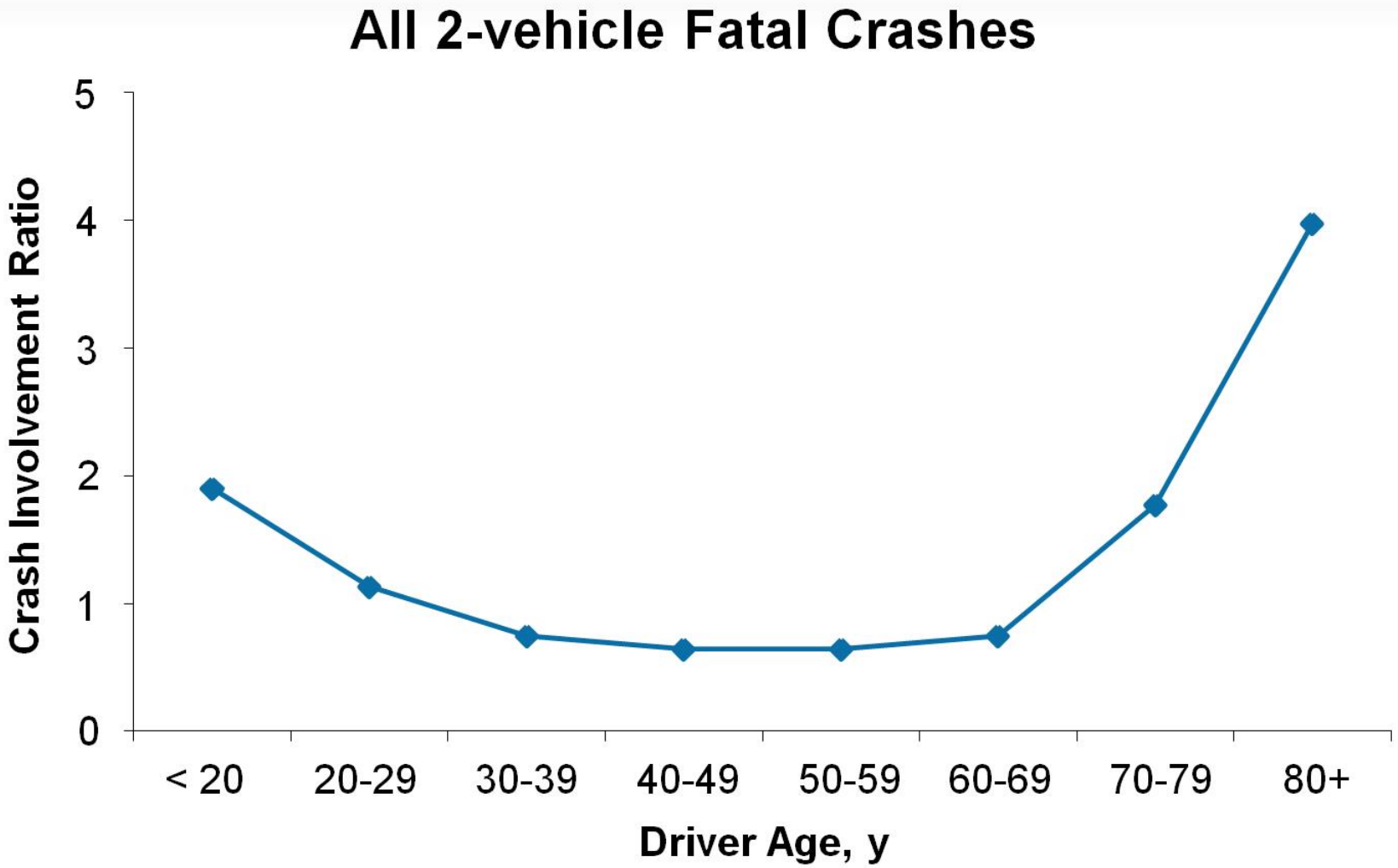
Developed as part of a Medscape education activity, *Assessing and Modifying Risks for Older Drivers*, supported by the U.S. Department of Health and Human Services.

Objectives

- Identify common medical problems that may lead to unsafe driving behaviors in older drivers

- Provide the background to plan appropriate strategies to screen older patients for possible driving impairments

Older Drivers: Is There a Problem?



Crash Involvement Ratio = at-fault/not at-fault.

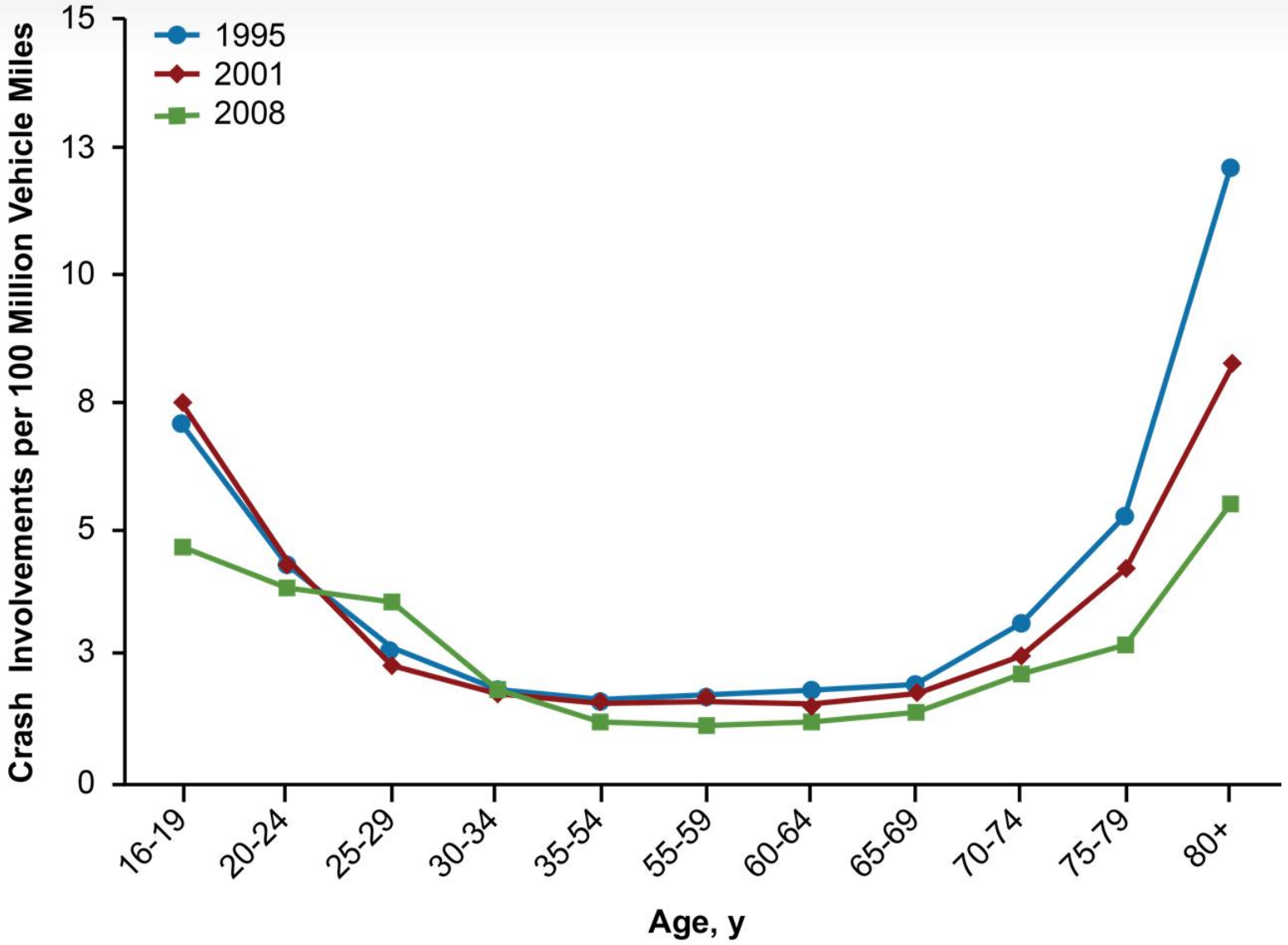
Stutts J, et al. National Highway Traffic and Safety Administration. DOT HS 811 093. 2009.[1]

Why Are Older Drivers a Concern?

- In 2012, 5560 older adults died in crashes and another 214,000 were injured.
- Older men are especially vulnerable, possibly because they continue driving longer as they age and drive more miles (↑ exposure).
- A contributing factor is the greater frailty that comes with age.
- The most deadly type of crash, side impact, occurs more characteristically with older drivers.

National Highway Traffic Safety Administration. DOT HS 812 004. 2014.[2]

Safety Trends for Older Drivers



Older Drivers: Is There a Problem?

- Age is a proxy for physical or cognitive impairments that significantly affect safe driving[a]
- With age, right-of-way and traffic sign violations increase[b]
- With age, intersection:nonintersection crash ratio increases[b]

a. Rizzo M. *JAMA*. 2011;305:1018-1026.[4]
b. McGwin G Jr, Brown DB. *Accid Anal Prev.* 1999;31:181-198.[5]

Aging Brings Changes That Affect Driving

- Vision and visual perception
- Physical function
- Cognition

Major Vision Conditions Affecting Driving

Cataracts[a,b]

- Affect 50% of people 65-74 years and 70% of those > 75 years
- Obstruct vision, impairing ability to see road, pedestrians, signs
- Impair contrast sensitivity, causing distance misjudgment
- Crash risk 1.3 × that of other older drivers
- Crash risk after cataract surgery reduced by 50%

Glaucoma[c,d]

- Blind spots develop
- Peripheral vision decreases ability to see vehicles
- Crash risk 1.7-5.2 × that of other older drivers

Macular degeneration

- Loss of detailed vision causes difficulty seeing road signs, pedestrians staying in lane plus impaired night driving
- Crash risk unknown

Diabetes[e]

- Retinopathy affects approximately 70% of patients with insulin-dependent diabetes
- Diabetic retinopathy can lead to total blindness
- Crash risk 4.0 × that of other older drivers

National Highway Traffic Safety Administration. DOT HS 809 838. 2007.[6]
a. Owsley, C, et al. *JAMA*. 2002;288:841-749[7]; b. MedlinePlus. Cataracts[8]; c. National Eye Institute. Facts About Glaucoma[9]; d. MEDLINEplus. Glaucoma[10]; e. Centers for Disease control and Prevention.[11]

Physical Aging: Speed

- Aging decreases the speed and coordination of movement
  - Reaction times are slower
- In certain well-learned tasks such as routine driving, older adults seem unimpaired
- The impact of slowed reaction may be more apparent when driving in unfamiliar settings, in emergency stops for pedestrians or animals, and when surprise maneuvers are made by other vehicles

National Highway Traffic Safety Administration. DOT HS 809 838. 2007.[6]

Major Physical Conditions Affecting Driving

Arthritis

- Affects 80% of people in their 70s
- Loss of dexterity affects use of controls
- Reduced range of motion affects reaching and head turning
- Loss of strength affects wheel and pedal control

Diabetes

- Peripheral neuropathy can affect a person's ability to operate brakes, clutch, and the gas pedal

National Highway Traffic Safety Administration. DOT HS 809 838. 2007.[6]

Neurologic Conditions Affecting Motor Function: Parkinson Disease

Motor deficits such as bradykinesia and rigidity affect driving by limiting important abilities such as:

- Steering
- Braking response
- Turning head and checking blind spots

Cognitive changes in some patients also affect driving:

- Hazard detection
- Poor planning and driving errors

Also sleep disturbances and drug effects

Klimkeit EI, et al. *Neurosci Biobehav Rev*. 2009;33:223-231.[12]

Major Medical Conditions Affecting Alertness

Obstructive sleep apnea

- Excessive daytime somnolence
- Treatable with continuous positive airway pressure

Cardiovascular disease

- Arrhythmias: prognosis and treatment affect decisions on safety to drive[a]

Epilepsy

- Stroke is the most common cause of new-onset seizures in the elderly
- Recommendations on driving vary by state[b]
- Most recommendations suggest 3- to 12-month seizure-free interval before return to driving[a]

Diabetes

- Acutely, hyperglycemia and hypoglycemia can cause drowsiness, lightheadedness, confusion, and loss of consciousness or seizure.

a. Afari ME, et al. *RI Med J (2013)*. 2013;97:40-43.[13]
b. American Medical Association, National Highway Traffic Safety Administration. Physician's Guide to Assessing and Counseling Older Drivers.[14]

Medications of Particular Concern

Antidepressants, antihistamines, benzodiazepines

- Cause blurred vision and drowsiness, affecting view of traffic and driving response
- Motor coordination affects the physical response to traffic situations

Antihypertensive agents

- Cause dizziness and fatigue impairing driver response
- Some medications may cause confusion and sedation resulting in poor driving response time or falling asleep at the wheel

Analgesic agents

- Cause confusion that results in dangerously slowed driving and poor response time to traffic situations.
- Muscle relaxants increase effect

American Medical Association, National Highway Traffic Safety Administration. Physician's Guide to Assessing and Counseling Older Drivers[14]; Hetland A, Carr DB. *Ann Pharmacother*. 2014;48:494-506.[15]

Good Cognition Is Critical Too!

Memory

- May result in failure to find destinations, but not a crash risk in itself

Visual attention and perception

- Limited field of view and visual perception problems increase traffic crash risk

Executive function

- Impaired judgment and decision making increases traffic crash risk

Driving Under the Influence of Dementia

Crash risk associated with selected medical conditions: relative risk of crashing

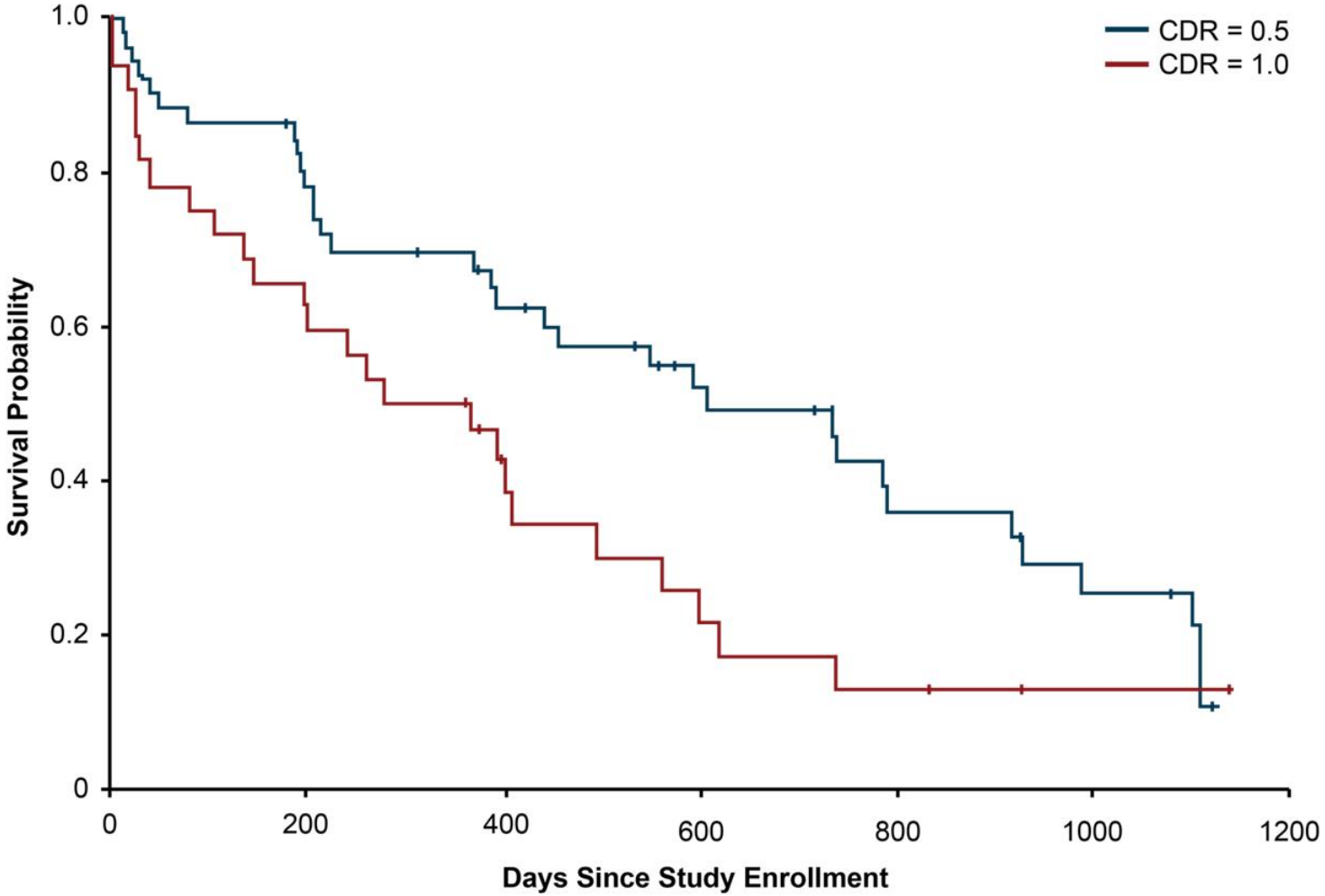
Dementia	2.1-5.0
Alcohol abuse and dependence	2.1-5.0
Schizophrenia	2.1-5.0
Sleep apnea	2.1-5.0
Epilepsy	1.1-5.0
Cardiovascular disease	1.1-5.0
Psychiatric disorder	1.1-5.0
Diabetes	1.1-2.0
Musculoskeletal/motor disability	1.1-2.0
Vision disorder	1.1-2.0

Marshall SC. *Traffic Injury Prev*. 2008;9:291-298.[16]

Common Driving Errors in Alzheimer Disease

- Forgetting where driving
- Difficulty navigating
- Failure to anticipate traffic situations
- Reduced problem solving around complex driving situation
- Poor lane keeping
- Failure to check blind spots

Time to Driving Restriction Due to Failed Road Test, At-Fault MVA, or Dementia Progression



Ott BR, et al. *Neurology*. 2008;70:1171-1178.[18]

Key Messages

- It’s not age, it’s ability!
- Abilities are affected by age-associated disease that impact driving
- Abilities can be tested and, in some cases, improved
- Driving cessation is a challenging and important decision for older people with dementia
  - Engage the driver and family early in the process

Thank you for your interest and attention!

Identifying Medically At-Risk Drivers

Older Driver Safety Summit
Planning a Safe and Mobile Future for Massachusetts

Ann Hollis, OTR/L
Beth Israel Deaconess Medical Center

Beth Israel Deaconess Medical Center

A teaching hospital of Harvard Medical School

Objectives

- Identify how clinicians can screen for driving safety
- The DriveWise® driving evaluation program
  - Description
  - Tests used
- Conclusion

How can clinicians identify which of their patients would benefit from a clinical driving evaluation?

- **Cognitive Screening tests**
  - **Already commonly used as part of medical assessment of older people**
  - **15 to 20 mins to administer**
  - **Don’t require special equipment or training**
- **Interview based screening tools**
  - **Fast and simple**
  - **Part of standard medical interview**

Mini-Mental State Examination (MMSE)

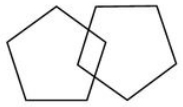
- **Orientation, registration, attention/calculation, recall & language**

Folstein et al., 1975

Screening Tool: The Mini-Mental State Examination (MMSE)

Patient _____ Examiner _____ Date _____

Maximum	Score	
		Orientation
5		• What is the (year) (season) (date) (day) (month)?
5		• Where are we (state) (country) (town) (hospital) (floor)?
		Registration
3		• Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat until he/she learns all 3. Count trials and record. Trials _____
		Attention and Calculation
5		• Serial 7's. 1 point for each correct answer. Stop after 5 answers. Alternatively spell "world" backward.
		Recall
3		• Ask for the 3 objects repeated above. Give 1 point for each correct answer.
		Language
2		• Name a pencil and watch.
1		• Repeat the following "No ifs, ands or buts."
3		• Follow a 3-stage command: "Take a paper in your hand, fold it in half and put it on the floor."
1		• Read and obey the following CLOSE YOUR EYES.
1		• Write a sentence.
1		• Copy the design shown.



_____ **Total Score**

ASSESS level of consciousness along a continuum _____

Alert Drowsy Stupor Coma

"Mini-Mental State." A Practical Method for Grading the Cognitive State of Patients for the Clinician. *Journal of Psychiatric Research*, 12(3): 189-198, 1975. Used with permission.

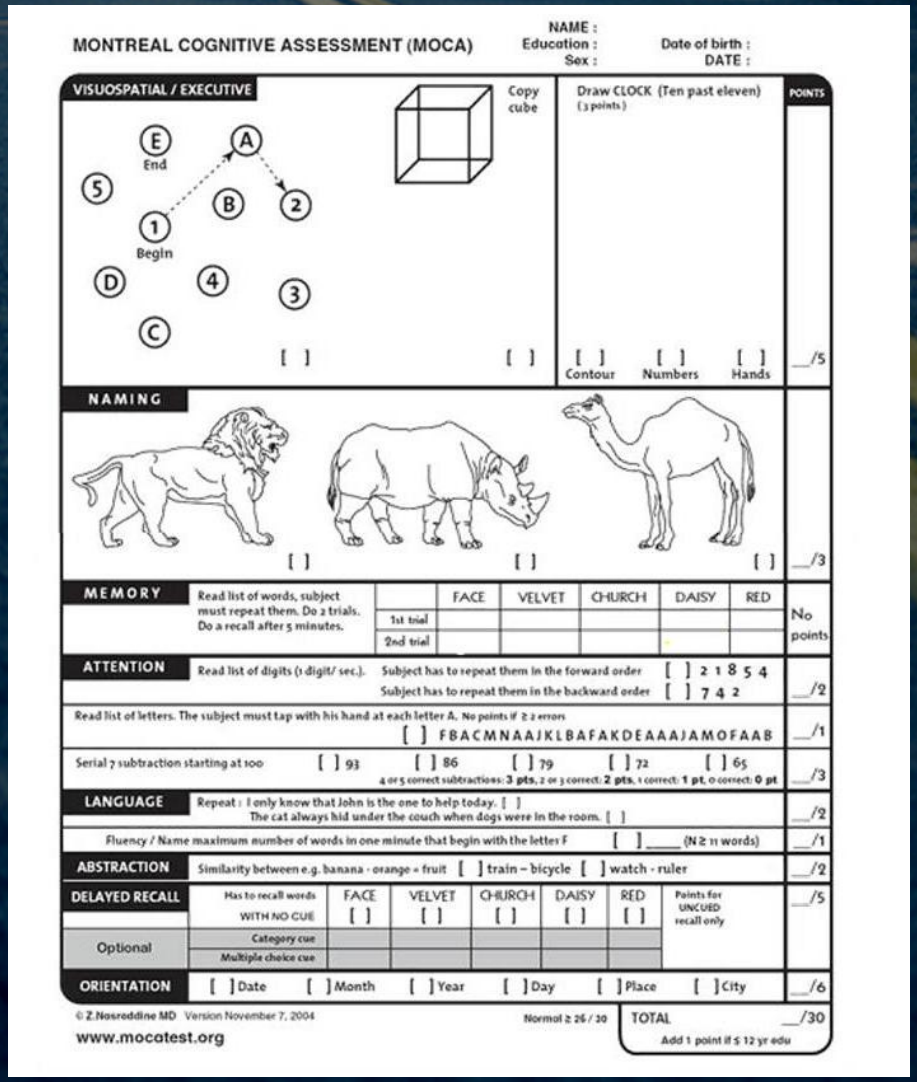
more information on reverse

MMSE and driving

Research shows variable results;

- **MMSE score predictive of driving safety (Fox et al., 1997; Stav et al., 2008; Matas et al., 2014)**
- **<24 is predictive of unsafe driving (Odenheimer, 1994)**
- **MMSE Not predictive of driving test outcome (Crizzle et al., 2012)**
- **No association between MMSE score and MVC's (Joseph et al., 2014)**

Montreal Cognitive Assessment (MoCA)



MONTREAL COGNITIVE ASSESSMENT (MOCA)

NAME :
Education :
Sex :
Date of birth :
DATE :

VISUOSPATIAL / EXECUTIVE — Copy cube — Draw CLOCK (Ten past eleven) (3 points) — POINTS

E End, A, 5, B, 2, 1 Begin, D, 4, 3, C

[ ] [ ] [ ] Contour [ ] Numbers [ ] Hands /5

NAMING

[ ] [ ] [ ] /3

MEMORY — Read list of words, subject must repeat them. Do 2 trials. Do a recall after 5 minutes.

	FACE	VELVET	CHURCH	DAISY	RED
1st trial					
2nd trial					

No points

ATTENTION — Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order [ ] 2 1 8 5 4. Subject has to repeat them in the backward order [ ] 7 4 2 /2

Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors
[ ] F B A C M N A A J K L B A F A K D E A A A J A M O F A A B /1

Serial 7 subtraction starting at 100 [ ] 93 [ ] 86 [ ] 79 [ ] 72 [ ] 65
4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt /3

LANGUAGE — Repeat : I only know that John is the one to help today. [ ]
The cat always hid under the couch when dogs were in the room. [ ] /2

Fluency / Name maximum number of words in one minute that begin with the letter F [ ] ____ (N ≥ 11 words) /1

ABSTRACTION — Similarity between e.g. banana - orange = fruit [ ] train – bicycle [ ] watch - ruler /2

DELAYED RECALL — Has to recall words WITH NO CUE: FACE [ ] VELVET [ ] CHURCH [ ] DAISY [ ] RED [ ] — Points for UNCUED recall only /5

Optional: Category cue; Multiple choice cue

ORIENTATION [ ] Date [ ] Month [ ] Year [ ] Day [ ] Place [ ] City /6

© Z.Nasreddine MD Version November 7, 2004
www.mocatest.org

Normal ≥ 26 / 30

TOTAL /30
Add 1 point if ≤ 12 yr edu

- **Visuospatial/executive, naming, memory, attention, language, abstraction & orientation**

(Nazzredine et al., 2005)

MMSE & MoCA in the prediction of driving test outcome

Hollis, Duncanson, Kapust, Xi and O'Connor 2015

- **Study of 92 adult drivers**
- **With cognitively intact people, neither test was predictive of road test outcome**
- **With cognitive impairment MoCA was a better predictor**
- **As MoCA score decreased by 1 point, a person was 1.36 times more likely to fail**
- **MoCA 'cut score' of 18 or less**

Interview based tools

- **4 C's**
- **Crash/Citation, Concern, Clinical status, Cognition**
- **Modeled after CAGE questionnaire**

THE 4 C's

	Crash/ Citation (2 years)	*Concern (Family)*	*Clinical status*	*Cognition (Impression)*
1	**No Crashes**	**None**	**Good health**	**Intact**
2	**1+ fender bender**	**Mild concern**	**Mild medical**	**Mild decline**
3	**Major Citation**	**Moderate concern**	**Moderate medical**	**Moderate decline**
4	**Crash(es)**	**Extreme concern**	**Severe medical**	**Severe decline**

THE 4 C's

O'Connor, Kapust, Lin, Hollis & Jones (2010)

- **Retrospective review of 160 DW records**
- **4 C's significantly associated with road test**
- **Concerns and Cognitive functions >.01**
- **95% w 4 C's score of 9+ marginal to unsafe on the road**

DriveWise®

Beth Israel Deaconess Medical Center

Division of Cognitive Neurology

617 667-4074


www.boston.com/wasserman
IS THIS WHERE I COME FOR THAT @≋#⊂⊃☆ DRIVING TEST?!
OVR 80
DMV
WASSERMAN
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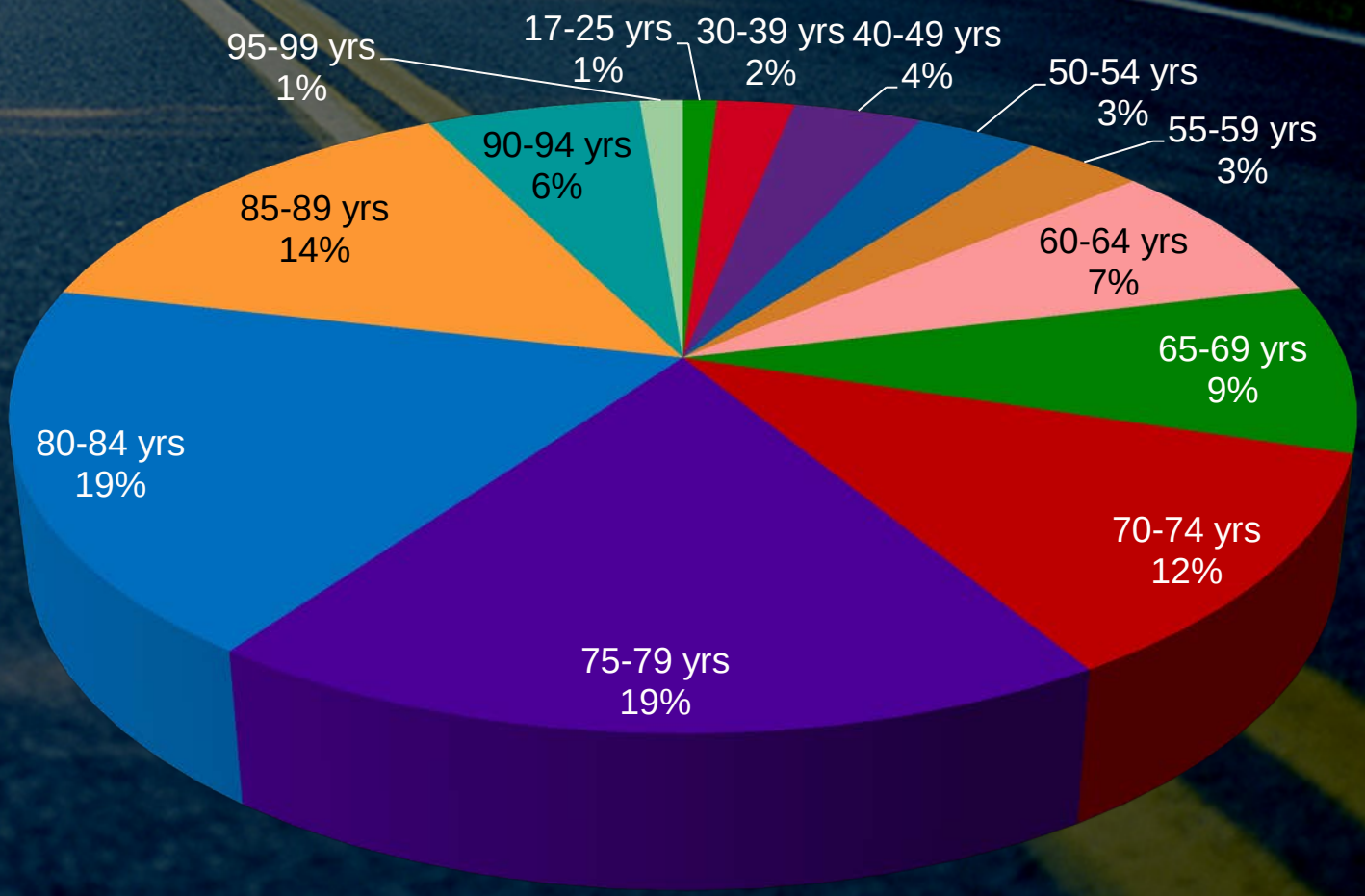
Who are our clients?

- **Over 600 individuals tested over 17 years**
- **People with medical, cognitive or psychiatric problems that may impair driving safety**
- **A range of diagnoses: Alzheimer's disease, MCI, MS, Parkinson's, ALS, Stroke, post ECT, bipolar, musculoskeletal problems, brain tumors**
- **Ages: 17-97**

Demographics

Breakdown by Age



DriveWise®

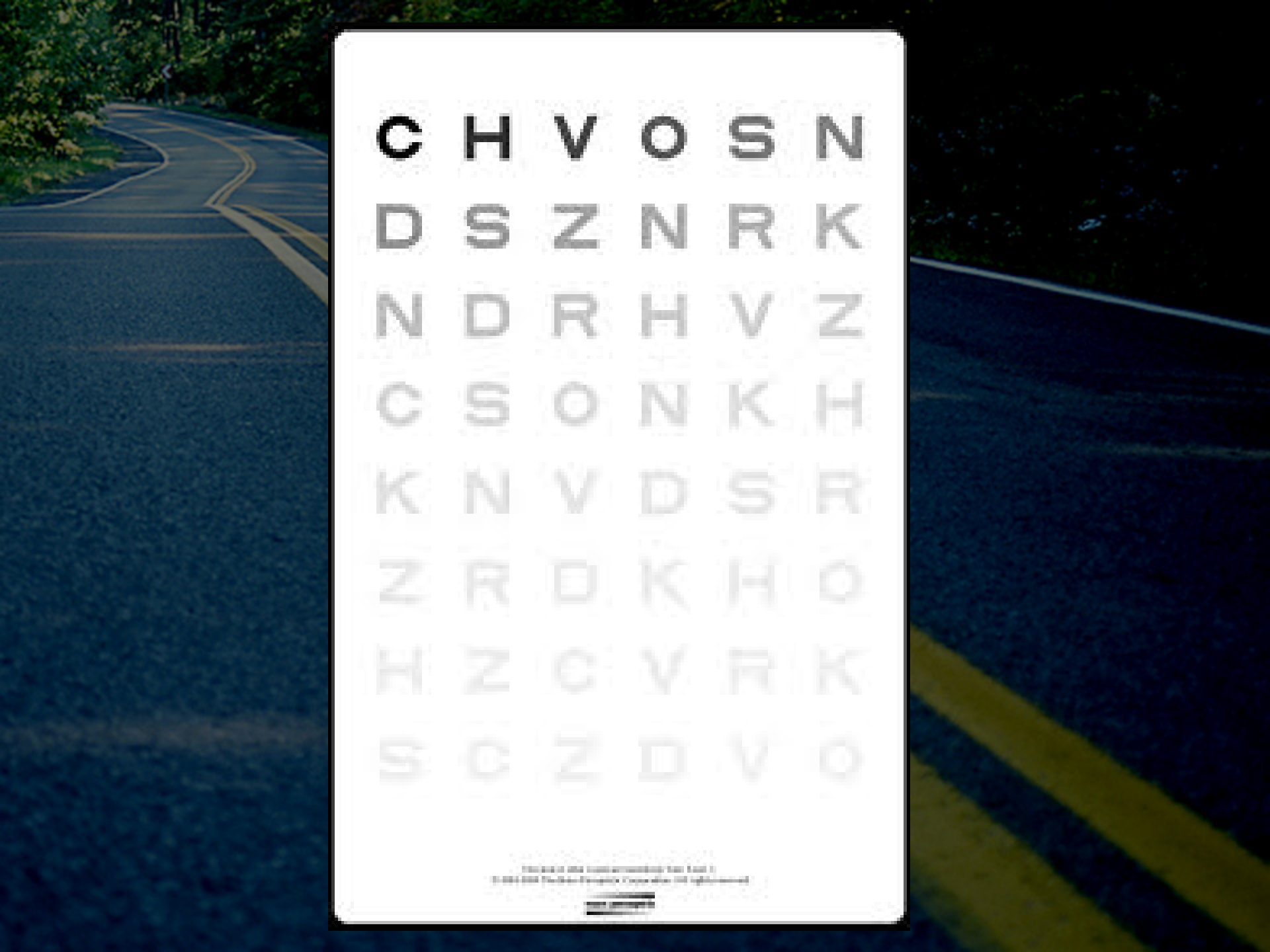
- **Evidenced-based assessment**
- **Clinical Social Work assessment**
- **OT office testing**
- **Road test (OT/Driving Instructor)**
- **Feedback session (SW)**

OT Assessment

- **In Office Testing**
  - **Vision & visual perception**
  - **Cognition**
  - **Physical function**
- **Standardized on road evaluation**

Vision Testing

- **Visual acuity**
- **Visual Field**
- **Tracking**
- **Depth perception**
- **Contrast Sensitivity**
- **Useful Field of View**


C H V O S N
D S Z N R K
N D R H V Z
C S O N K H
K N V D S R
Z R D K H O
H Z C V R K
S C Z D V O

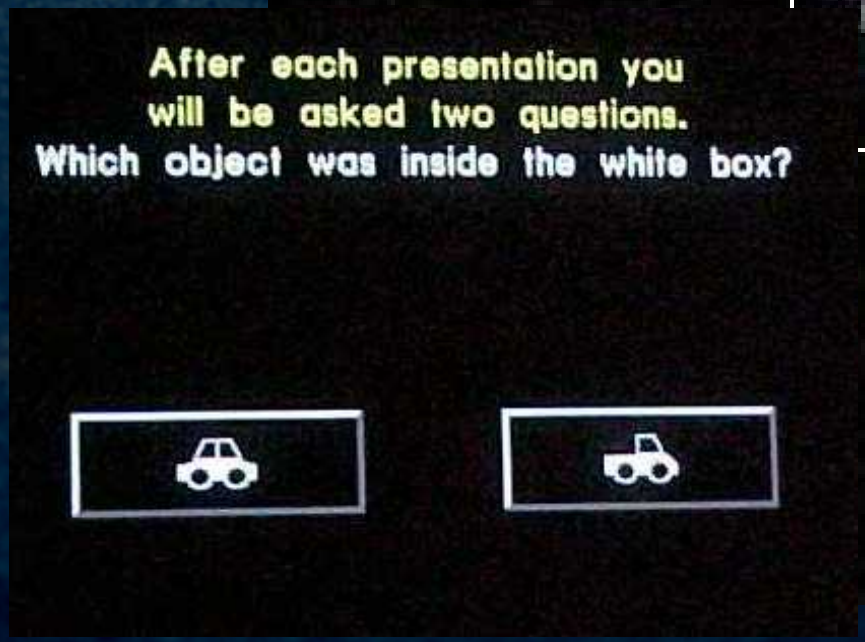
Useful Field of View

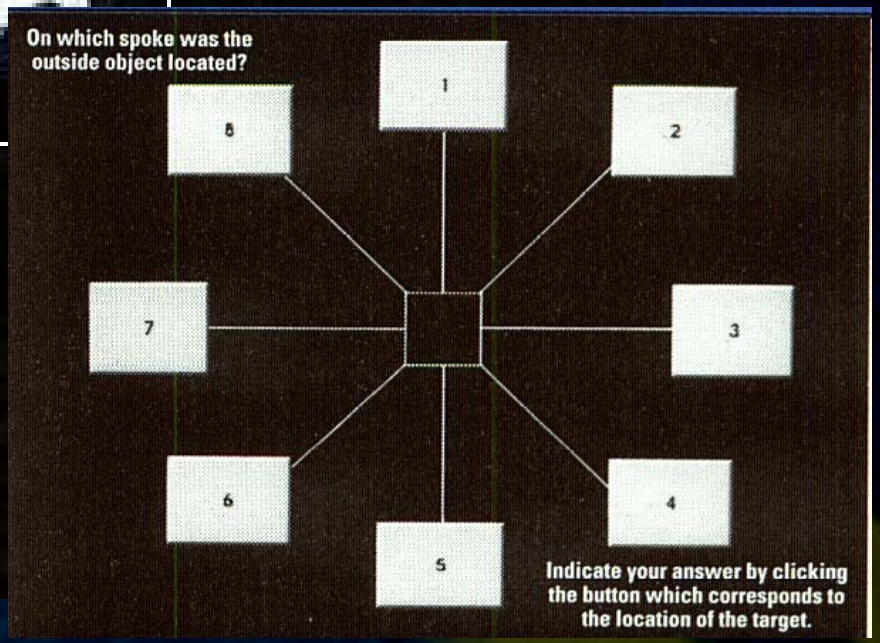
Useful Field of View Test
(Ball et al., 1987)

- **Three part test. Test 1, visual processing. Test 2, divided attention. Test 3 selective attention**
- **Predictive of road test outcome (Myers et al., 2000; Clay et al., 2005; Wood et al., 2012; Bowers et al., 2013)**
- **Predictive of at fault MVC's (Owlsley et al., 1998; Ball et al., 2006; Cross et al., 2009)**

UFOV Test 2

Measur n two



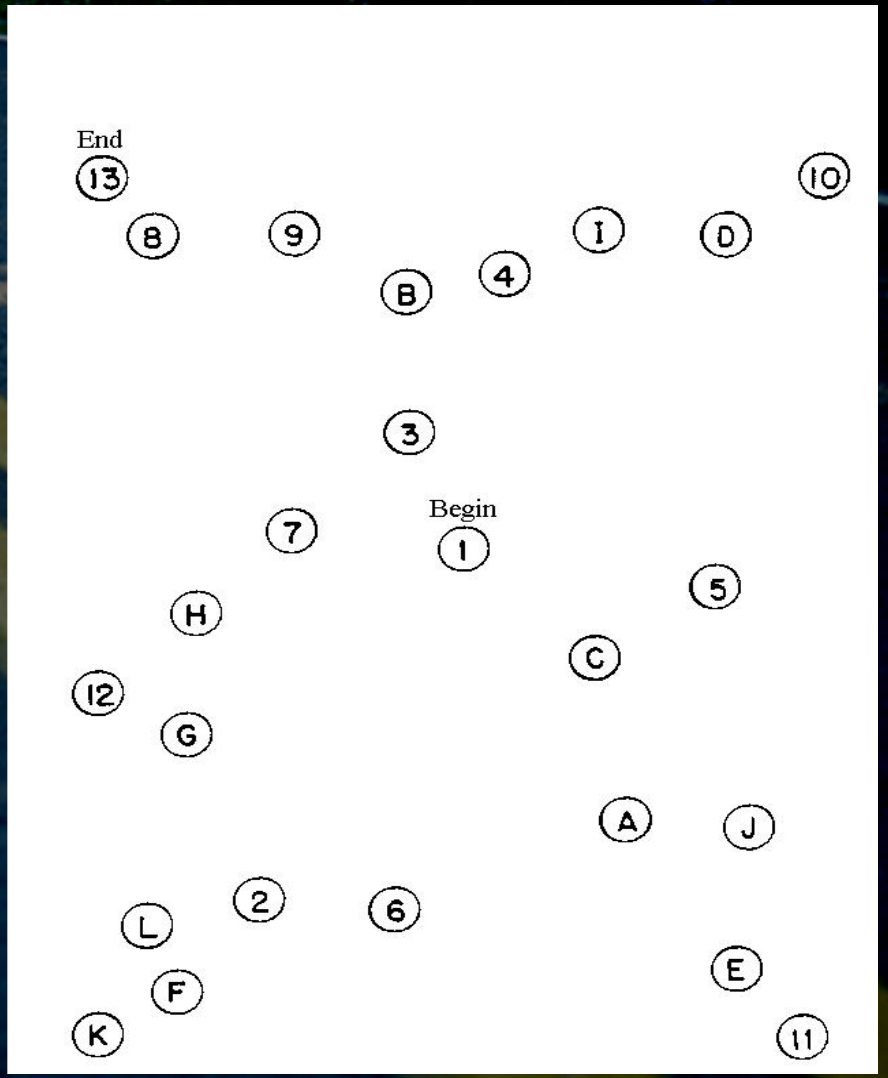


Cognitive issues relevant to driving

- **Attention to task & ability to divide attention**
- **Information processing speed**
- **Decision making**
- **Memory**

Trail Making Tests

- **Sensitive to divided attention**
- **Many studies found predictive of driving**
  (Roy et al., 2013)

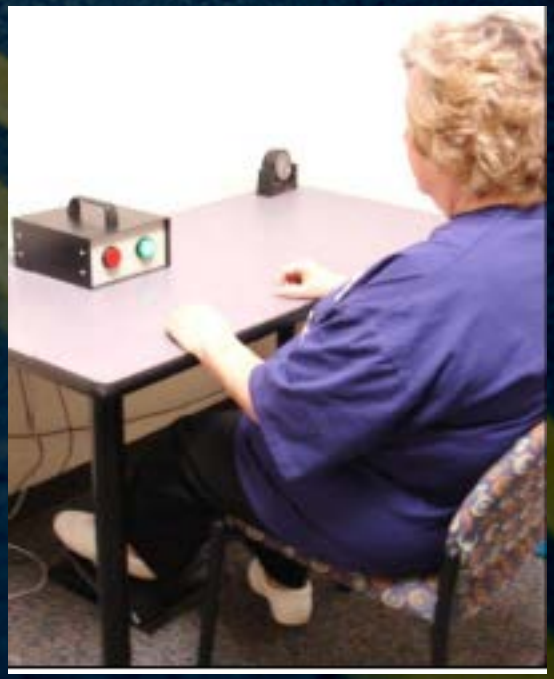


Trail Making Test Part B

Reitan, 1955

Physical Assessment

- **Strength and range of motion**
- **Coordination**
- **Sensation**
- **Mobility**
- **Brake reaction time**



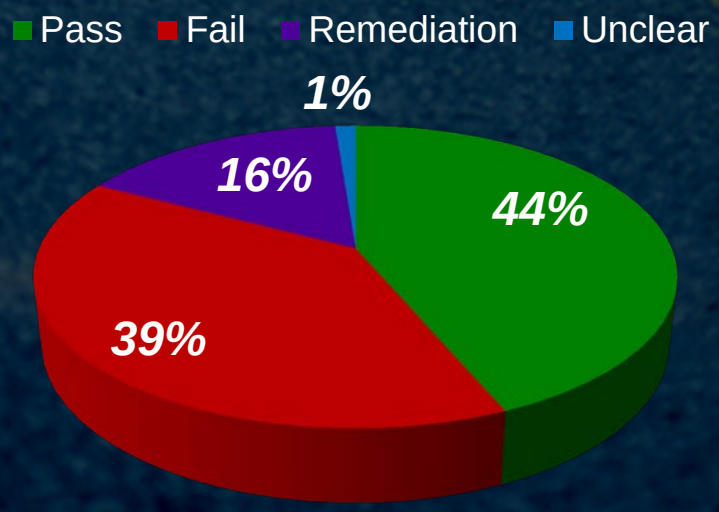
On Road Evaluation

- **The ‘gold standard’ for assessing driver safety (Amick & Ott, 2008)**
- **Standardized assessment based on the Washington University Road Test (Hunt et al., 1997) presents a variety of driving challenges**
- **OT and CDI both separately score driving performance (strong IRR)**
- **Only a ‘snapshot’ of driving**

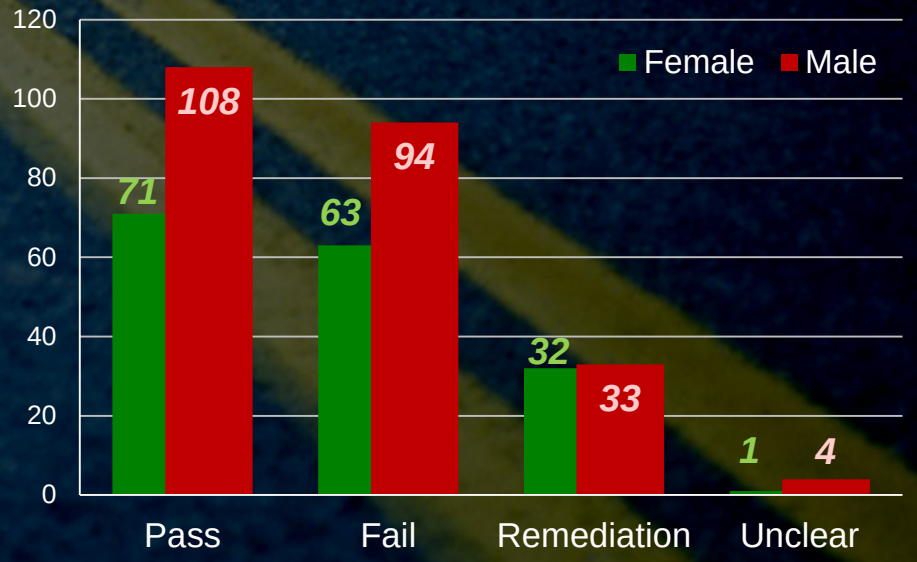
Outcomes of the DriveWise Evaluation

- **Individuals can either pass, fail, or be referred for remediation.**

Overall Results



By Gender



Improving things for older drivers

- **Infrastructure improvements**
- **New technology**
  - **Vehicles**
  - **Training to improve skills**
- **Adapting vehicle for physical limitations**
- **Strategies for individual drivers**
  - **Limiting driving & planning journeys**
  - **Minimizing distraction**

Conclusions

- **Simple tests can help screen who will benefit from a driving evaluation**
- **In office tests whilst predictive are not enough**
- **On road evaluation is currently the best measure**
- **Age alone does not predict poor driving**

OLDER DRIVER SAFETY SUMMIT: PLANNING A SAFE AND MOBILE FUTURE FOR MASSACHUSETTS

June 16, 2015

Plenary Session I – Medical Track: Identifying Medically At-Risk Drivers

Elin Schold Davis, OTR/L, CDRS
American Occupational Therapy Association
Bethesda, MD

AOTA® The American Occupational Therapy Association, Inc.

Living Life To Its Fullest®
OCCUPATIONAL THERAPY

It Matters in People's Lives

- Driving is and will remain the **primary mode** of transportation for older adults.
- Driving represents the ability to maintain connections and contribute to the community.
- Studies show there may be a relationship between health, sense of autonomy, the ability to drive.
- Loss of mobility can lead to depression, low life satisfaction, health problems, isolation, and loneliness.

The Purpose of Identifying the Medically at Risk Driver

- Is to serve the individual driver
  - Awareness and prevention
  - Informed choice to access education or refresher
  - Early for informed choice or planning for driving retirement
- To prioritize safety - individual and community
  - Unfortunately some impairments cannot be compensated nor remediated
- Build message of wellness, not “take away”

Increased Risk for Injury

Frailty and Fragility

"they sustain injuries more easily and are more frail which reduces their odds at recovering from injuries".

Medically at risk

- Diminished strength, vision or cognition

www.ircobi.ptg/downloads/irc12/pdf_files/14.pdf

2013 DOT HS 811 864 www.NHTSA.gov

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Living Life To Its Fullest®

OCCUPATIONAL THERAPY

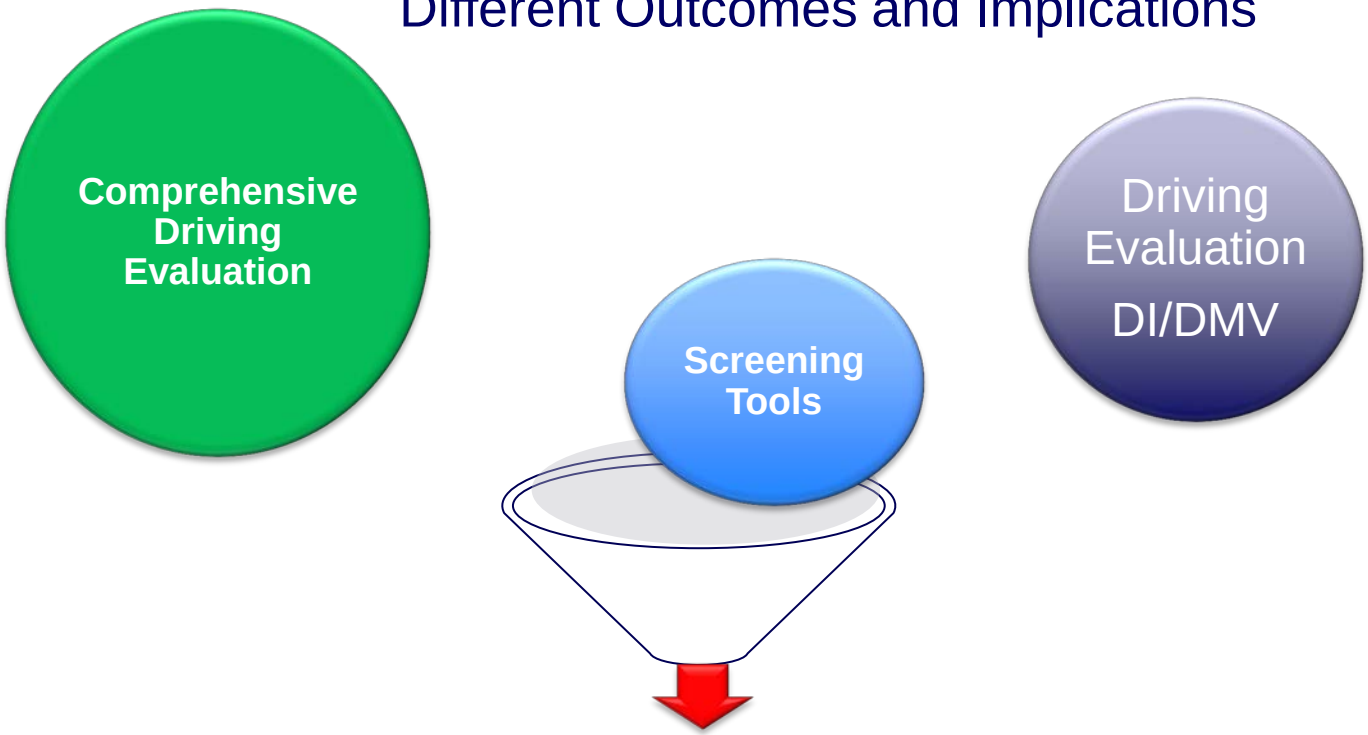
Distinguish the tools – Distinguish the providers

- Medically at Risk
  - Screening, assessment and road test DMV
  - Comprehensive Driving Evaluation
- Purpose and interpretation

Information necessary and required to make decisions about an individual's Driver's License status

“different, not necessarily better”

Different Services
Different Providers
Different Outcomes and Implications



Conundrum: need for policies, licensing action, and services

- Individuals do not always make the appropriate decisions with regards to driving modification or cessation because of lack of insight, poor judgment, and loss of reasoning ability (Adler & Kuskowski, 2003).
- Up to 25 percent of older adults continue driving after a physician's recommendation for driving cessation

  (Dobbs, Carr, & Morris, 2002).

Spectrum of Driver Rehab Services

Types:

Community Based

Medically Based

Specialized Driver Eval & Train

Descriptions of:

Program style

Providers & Credentials

Provider's Knowledge

Provider's services

Outcome

Spectrum of Driver Services: Right Services for the Right People at the Right Time

A description consumers and health care providers can use to distinguish the type of services needed for an older adult.

	COMMUNITY-BASED EDUCATION		MEDICALLY-BASED ASSESSMENT, EDUCATION AND REFERRAL		SPECIALIZED EVALUATION AND TRAINING
Program Type	**Driver Safety Programs**	**Driving School**	**Driver Screen**	**Clinical IADL Evaluation**	**Driver Rehabilitation Programs (Includes Driver Evaluation)**
Typical Providers and Credentials	Program specific credentials (e.g. AARP and AAA Driver Improvement Program).	Licensed Driving Instructor (LDI) certified by state licensing agency or Dept. of Education.	Health care professional (e.g., physician, social worker, neuropsychologist).	Occupational Therapy Practitioner (Generalist or Driver Rehabilitation Specialist#). Other health professional degree with expertise in Instrumental Activities of Daily Living (IADL).	Driver Rehabilitation Specialist#, Certified Driver Rehabilitation Specialist*, Occupational Therapist with Specialty Certification in Driving and Community Mobility+.
Required Provider's Knowledge	Program specific knowledge. Trained in course content and delivery.	Instructs novice or relocated drivers, excluding medical or aging conditions that might interfere with driving, for purposes of teaching / training / refreshing / updating driving skills.	Knowledge of relevant medical conditions, assessment, referral, and / or intervention processes. Understand the limits and value of assessment tools, including simulation, as a measurement of fitness to drive.	Knowledge of medical conditions and the implication for community mobility including driving. Assess the cognitive, visual, perceptual, behavioral and physical limitations that may impact driving performance. Knowledge of available services. Understands the limits and value of assessment tools, including simulation, as a measurement of fitness to drive.	Applies knowledge of medical conditions with implications to driving. Assesses the cognitive, visual, perceptual, behavioral and physical limitations that may impact driving performance. Integrates the clinical findings with assessment of on-road performance. Synthesizes client and caregiver needs, assist in decisions about equipment and vehicle modification options available. Coordinates multidisciplinary providers and resources, including driver education, health care team, vehicle choice and modifications, community services, funding / payers, driver licensing agencies, training and education, and caregiver support.
Typical Services Provided	1) Classroom or computer based refresher for licensed drivers: review of rules of the road, driving techniques, driving strategies, state laws, etc. 2) Enhanced self-awareness, choices, and capability to self-limit.	1) Enhance driving performance. 2) Acquire driver permit or license. 3) Counsel with family members for student driver skill development. 4) Recommend continued training and / or undergoing licensing test. 5) Remedial Programs (e.g., license reinstatement course for teens / adults, license point	1) Counsel on risks associated with specific conditions (e.g., medications, fractures, post-surgery). 2) Investigate driving risk associated with changes in vision, cognition, and sensory-motor function. 3) Determine actions for the at-risk driver: • Refer to IADL evaluation, driver rehabilitation program, and / or other services. • Discuss driving cessation; provide access to counseling and education for alternative transportation options. 4) Follow reporting / referral structure for licensing recommendations.	1) Evaluate and interpret risks associated with changes in vision, cognition, and sensory-motor functions due to acute or chronic conditions. 2) Facilitate remediation of deficits to advance client readiness for driver rehabilitation services. 3) Develop an individualized transportation plan considering client diagnosis and risks, family, caregiver, environmental and community options and limitations: • Discuss resources for vehicle adaptations (e.g., scooter lift). • Facilitate client training on community transportation options (e.g., mobility managers, dementia-friendly transportation). • Discuss driving cessation. For clients with poor self-awareness, collaborate with	Programs are distinguished by complexity of evaluations, types of equipment, vehicles, and expertise of provider. 1) Navigate driver license compliance and basic eligibility through intake of driving and medical history. 2) Evaluate and interpret risks associated with changes in vision, cognition, and sensory-motor functions in the driving context by the medically trained provider. 3) Perform a comprehensive driving evaluation (clinical and on-road). 4) Advise client and caregivers about evaluation results, and provides resources, counseling, education, and / or intervention plan. 5) Intervention may include training with compensatory strategies, skills, and vehicle adaptations or modifications for drivers and passengers. 6) Advocate for clients in access to funding resources and / or reimbursement. 7) Provide documentation about fitness to drive to the physician and / or driver-licensing agency in compliance with regulations. 8) Prescribe equipment in compliance with state regulations and collaborate with Mobility Equipment Dealer^ for

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OCCUPATIONAL THERAPY

Behind The Wheel
Using Michon's Levels

- **Operational**
  - Strength to control steering wheel and braking
  - Reach to turn signal
  - Shifting into gear

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BTW - Michon's Levels

- **Tactical**
  - Navigate right and left turns
  - Back up and park
  - Accelerate/ slow in relationship to traffic
  - Lane change & merge

BTW - Michon's Levels

- **Strategic**
- Anticipation and Decisions
  - Route planning, and judgment
  - Decision making & problem solving
  - ***Can I manage this traffic?***
- Problem solve <u>while driving</u>
  - Proper response to unexpected
  - Inhibit road rage/ frustration
  - **Is it safe to merge onto highway?**

Requires a Range of Services

- Toward staying on the road
- Toward planning for driving retirement
- Respect the abruptness of a medical condition that takes driving *"off the table"*
  - Leaving a citizen and their family unprepared and (potentially) at a loss.
  - Important role of the medical professional.

Why Occupational Therapy & Driving?

Occupational Therapists:

- Understand the critical demands of driving
- Have science-based knowledge to understand progressive conditions and life changes affecting driving
- Understand how community mobility affects quality of life

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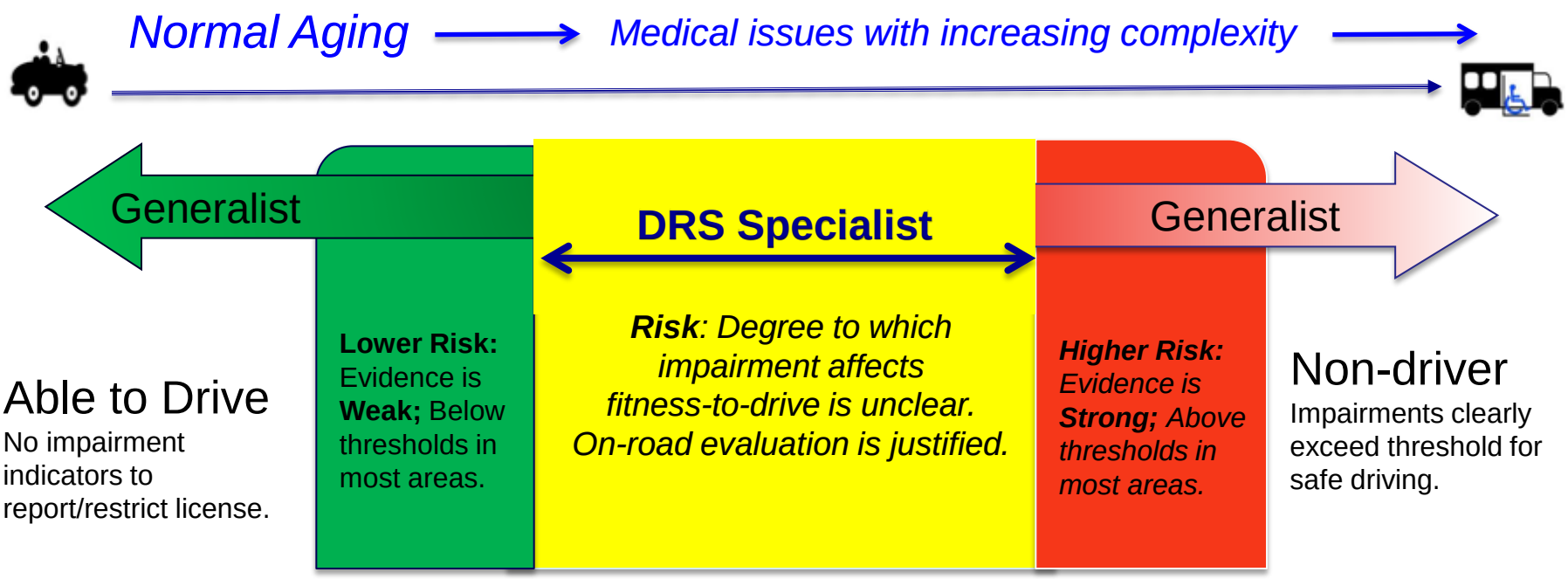
Occupational Therapy Intervention: Evidence, Clinical Judgment, and Risk



Interventions for Generalists: Plan & Build Options for Mobility

Maximize Skills & Abilities
Self Awareness
Mobility preservation: Driving

Refer to specialized services
Develop transportation alternatives
Mobility preservation: Transition

Promote Driving Retirement,
Mobility preservation: Implement supportive transportation

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Dickerson & Schold Davis, 2013

Awareness Initiatives

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Thank You!!

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On-Line Resources

AAA-Senior Drivers
http://seniordriving.aaa.com/

AARP-Driver Safety info, online course at
http://www.aarp.org/home-garden/transportation/info-05-2010/Warning_Signs_Stopping.html

National Highway Transportation & Safety Administration (NHTSA) Older Road Users
http://www.nhtsa.gov/Senior-Drivers

The Hartford Center for Mature Market Excellence
http://www.thehartford.com/mature-market-excellence/family-conversations-with-older-drivers