Why is Grandma Asking for Directions to the Local Store? Assessing Older Driver Cognition and Safety

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Objectives

Upon completion the participant will be able to:

- Name the stakeholders involved in assessing older drivers' risk on the road.
- Describe and discuss the recommended assessment process.
- List medical-related components that may affect driving ability
- Identify various screens that may be used to assess the older adult to determine their cognitive and physical safety while driving

Problem

- How do we address the problem of reducing the number of older drivers who are lost and get into crashes due to losses in cognitive & physical function, so that grandmother does not end up lost ?
- The NHTSA 5-year plan challenged health professionals, law enforcement and other stakeholders to collaborate and improve the safety of older drivers. This includes the education of stakeholders recognizing older drivers at risk.
- This risk assessment is a particular challenge with older drivers experiencing cognitive declines. This is in part because cognitive losses are more difficult to recognize than physical disabilities.
- Because cognitive losses are usually progressive, it is often difficult to determine the point at which it presents an unacceptable safety risk.

Cognitive Demands of Driving

- Many cognitive skills are needed for safety driving. They include but are not limited to:
  - Spatial memory - navigation
  - Attention/Information processing – Integrate multiple source of information in real time
  - Decision-making – Does situation warrant action?
  - Fast reaction time – Initiation of appropriate action quickly, following appropriate assessment of the situation

http://www.lifelongdriver.com/hazard-detection

Normal Age-Related Cognitive Change and Driving

- Some of the age-related cognitive changes include:
  - Slower executive functions, i.e. decision-making and reaction time
  - Changes in ability to maintain attention
- Impact on those changes on driving
  - Affects operations such as judging gaps at intersection and during lane changes
  - As a result most crashes in older adults occur at intersections, especially left hand turns

Most fatal crashes in older adults happen at intersections

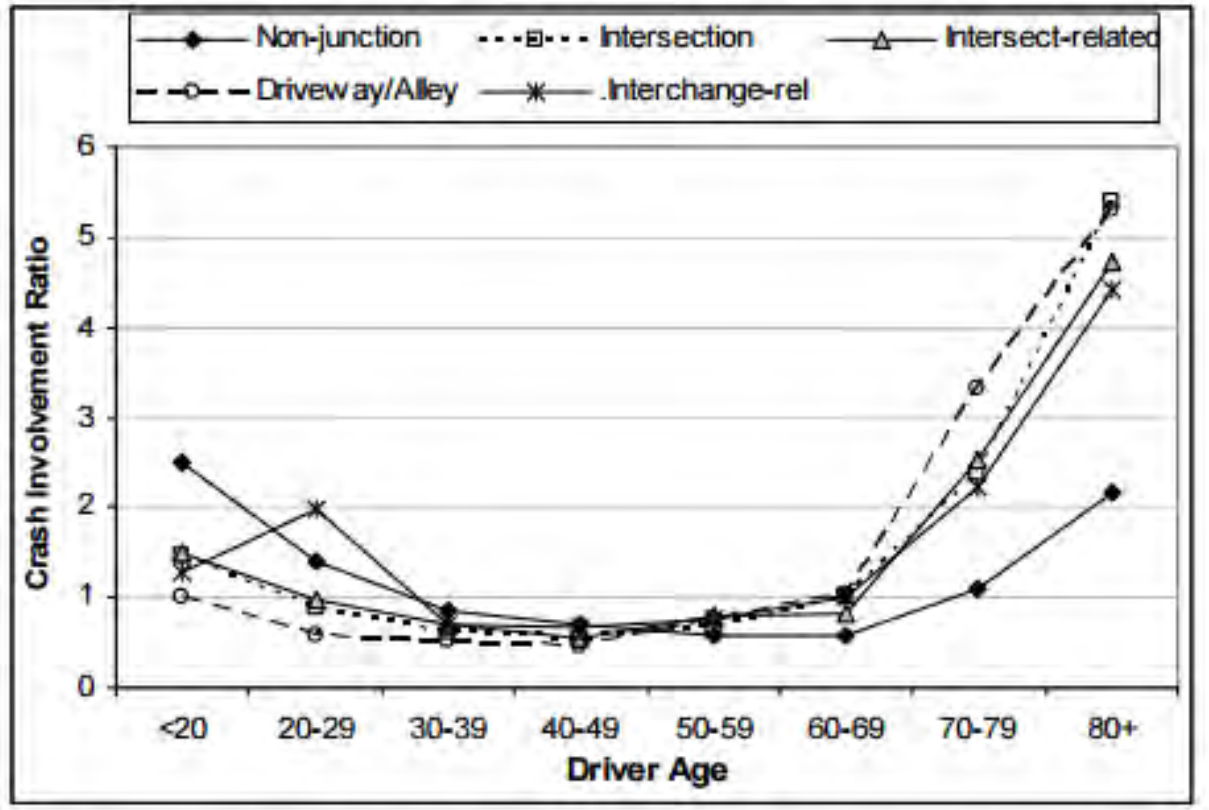
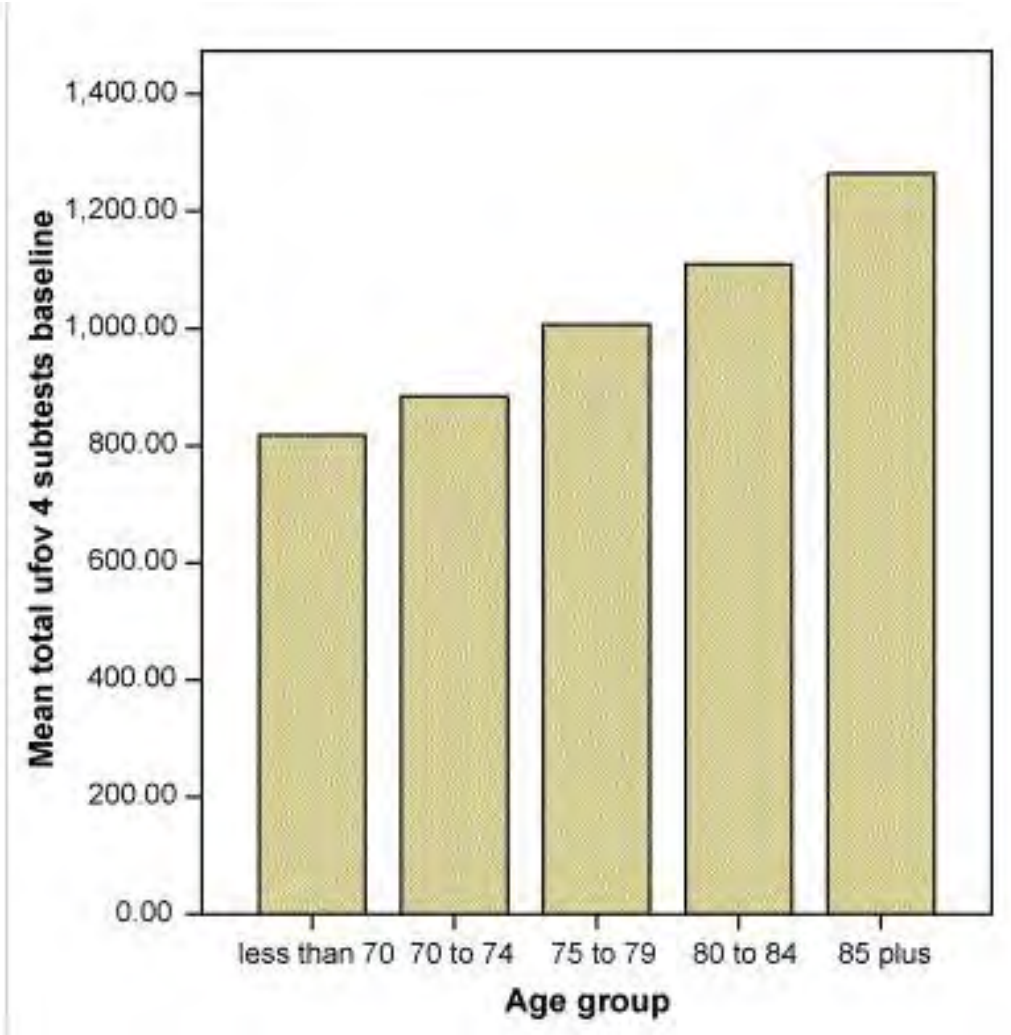


Figure 7. Two-vehicle fatal CIRs by roadway junction type.

Normal Age-Related Cognitive Change and Driving (cont.)

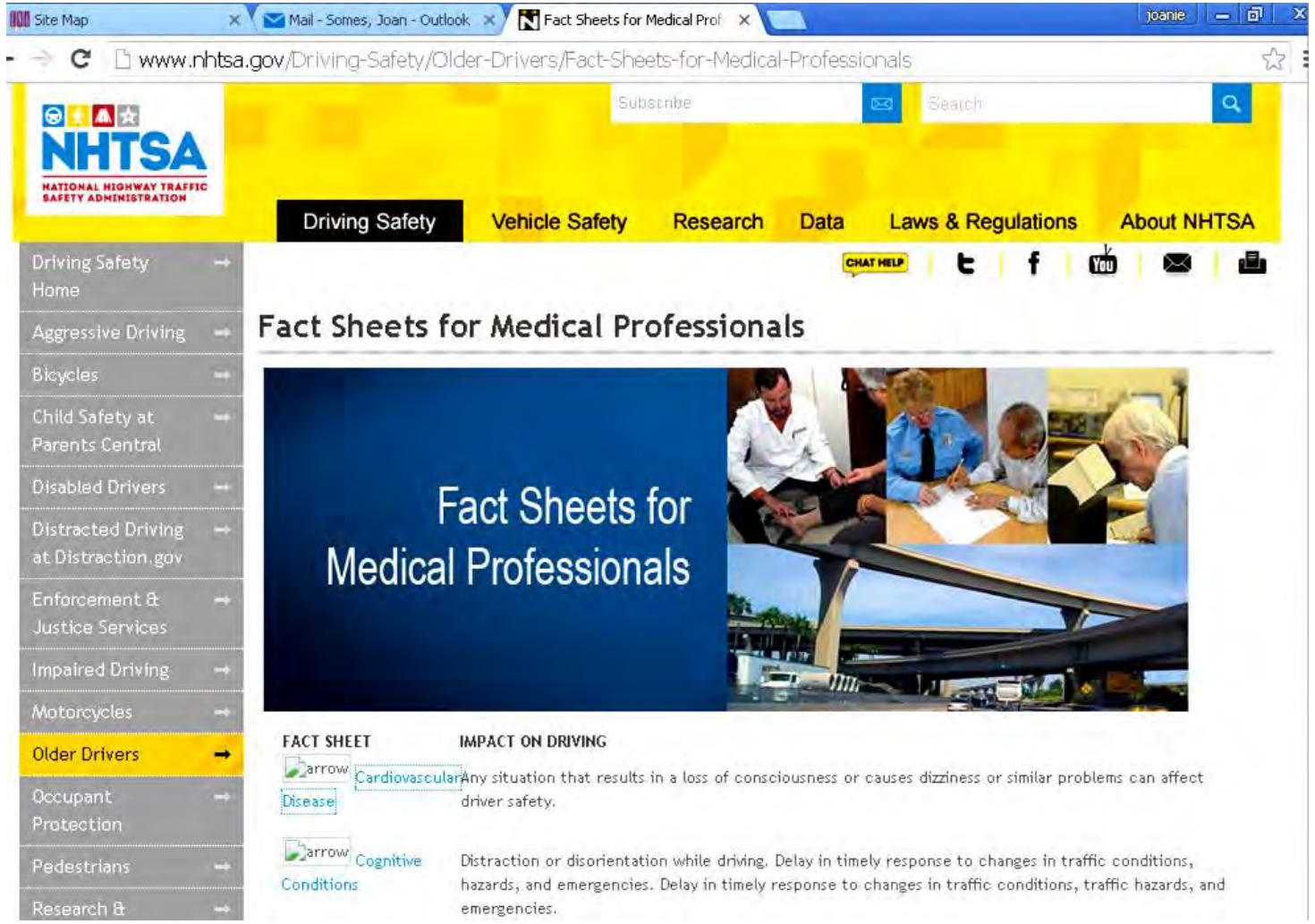
- Useful Field of View (UFOV)
  - Ability to process the information that is visually perceived at any given time.
  - It is a measure of visual attention and information processing – so cognitive function-
  - UFOV worsens with advancing age
  - Worsening of UFOV are associated with increased crash risk
  - People with dementia have severe limitations in UFOV



Archives of Clinical Neuropsychology 21 (2006) 275–286

Clinical Conditions Associated with Physical or Cognitive Limitations Affecting Driving

- List from NHTSA:
- NHTSA link
- Age-related low vision
- Diabetes
- Stroke
- Parkinson's
- Alzheimer's disease/dementia
- Severe Arthritis.
- Sleep apnea



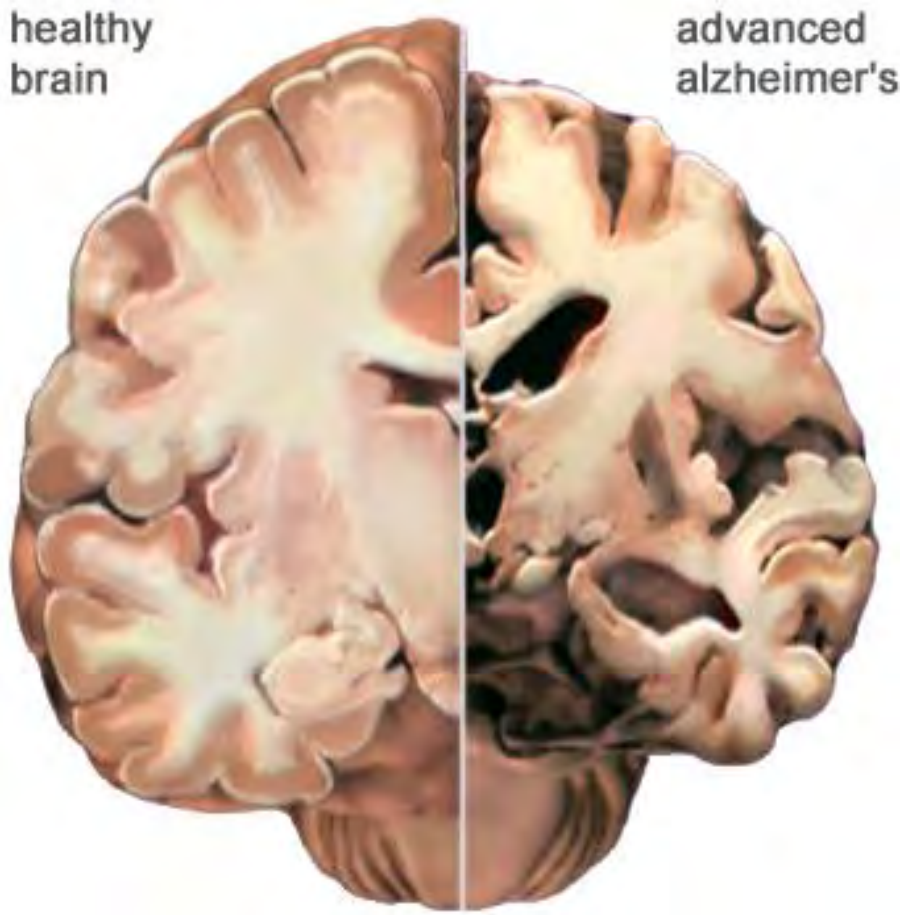
Other Conditions Linked to Driving Risk

- Seizures
- Closed Head injuries (i.e. following falls)
- Depression
- Cardiac disease (CHF, dysrhythmia)
- Syncope/orthostatic hypotension
- Substance use/abuse
- Metabolic disturbances
- Side effects of medication

A brief overview of seven medical conditions common among older drivers that can impact their driving abilities.

Neurocognitive Disorders/Dementia and Driving

- Neurocognitive disorders (NCD) affect brain and everyday functions
- Two main categories of NCD's
  - Vascular – i.e. TIAs/mini-strokes)
  - Neurodegenerative (neurocognitive disorder)
- Some NCD's evolve, some do not.
- There are many disease causing NCD i.e.
  - Fronto-temporal dementia (little memory loss)
  - Lewy-Body disease (includes Parkinson's-like symptoms)
  - Alzheimer's disease (memory losses appear early in the disease)



http://www.alz.org/braintour/healthy_vs_alzheimers.asp

Neurocognitive Disorders (NCD) and Driving (cont.)

- Mild Neurocognitive Disorder (mNCD) include:
  - Mild Cognitive Impairment often remains stable.
  - Driving is usually safe if Mild NCD
  - But mild NCD can also be the early stage of dementia (Major NCD), thus worsen.
- Major Neurocognitive Disorders (MNCD)
  - Can be due to Alzheimer's or other conditions
  - Result in significant losses of brain function
  - Driving with Major NCD is not safe

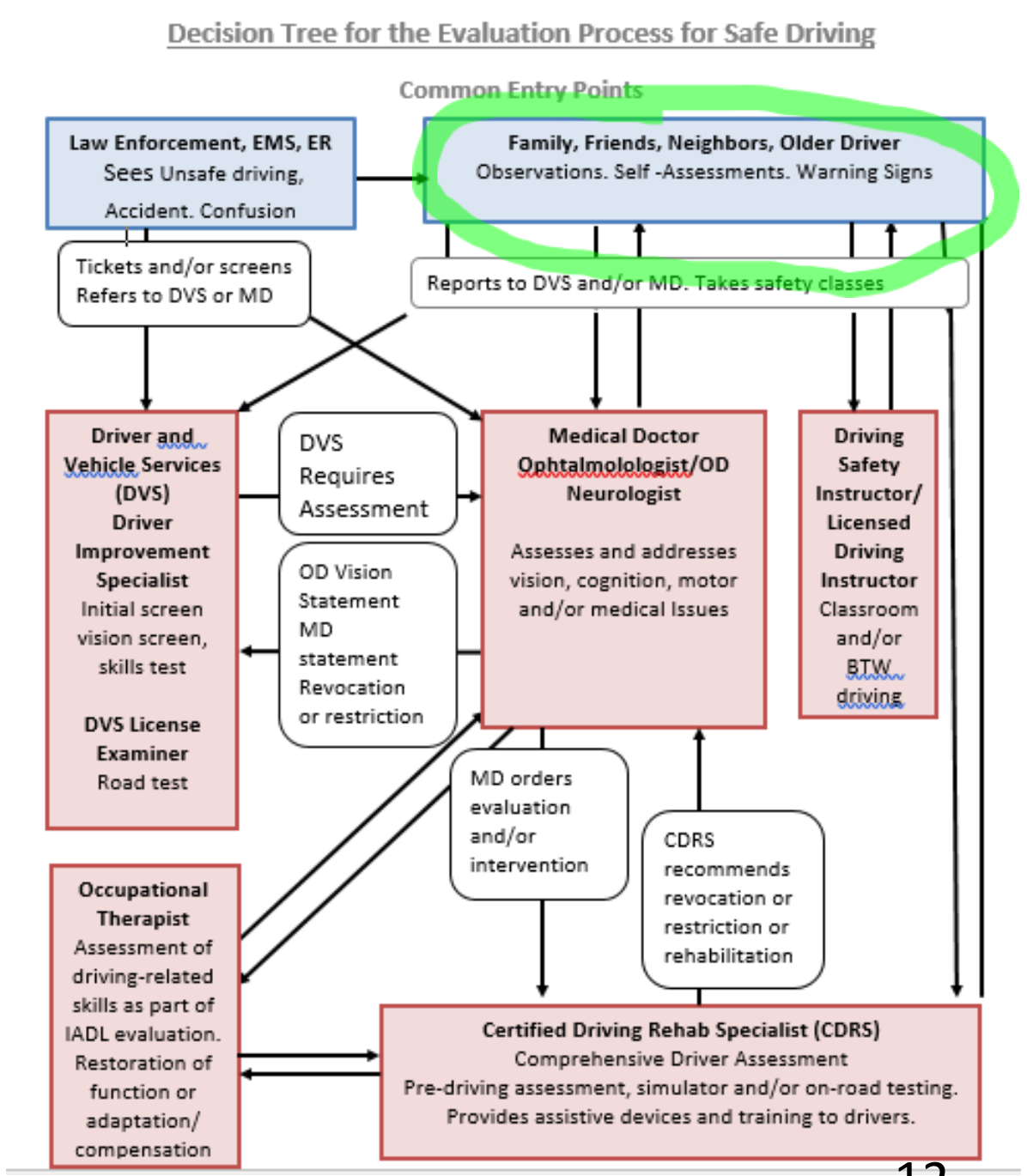
http://www.nhtsa.gov/Driving-Safety/

Neurocognitive Disorder and Driving Risk

- In addition to crash risk, fatalities are linked to getting lost
- The challenge is to balance the risk of isolation following stopping driving too soon, with the risk to self and others resulting from driving too long
- The problem is that no single assessment of cognitive function is enough to predict whether a person is safe vs unsafe to drive
- A combination of assessments and tiered testing process is needed

Stakeholders in Assessment Process

- The most common entry points to the assessment process are at the top of this diagram (in blue).
- The arrows represent common next steps with white boxes explaining what it entails
- We will first discuss the situation in which the community - gas station/retail, friends, neighbors, family - notices possible driving risk in an older person.



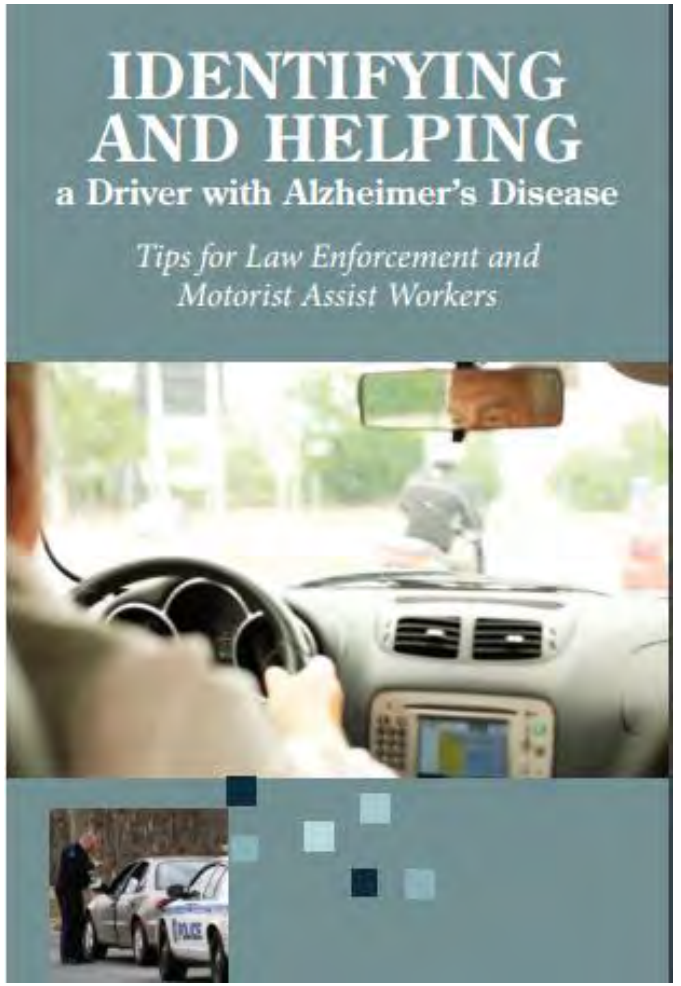
Community Stakeholders

- How do community members deal with person with dementia who is lost?
- MNAlzheimer's Association *Dementia Friendly Community* tool kit to provide resources for community members and government services

http://www.actonalz.org/planning-emergency-response

Tools for Gas Station and Other Retail

- Using the example in our title: Possible tool for gas station attendant had an older driver looking lost and confused:
- Brochure from International Association of Chiefs of Police (IACP). IACP Brochure
- Should not send them off to drive if confused
- → Possible actions: Call family or Law Enforcement if family can't be located.
- Preventing agitation can make it more likely to remember significant other's contact information.

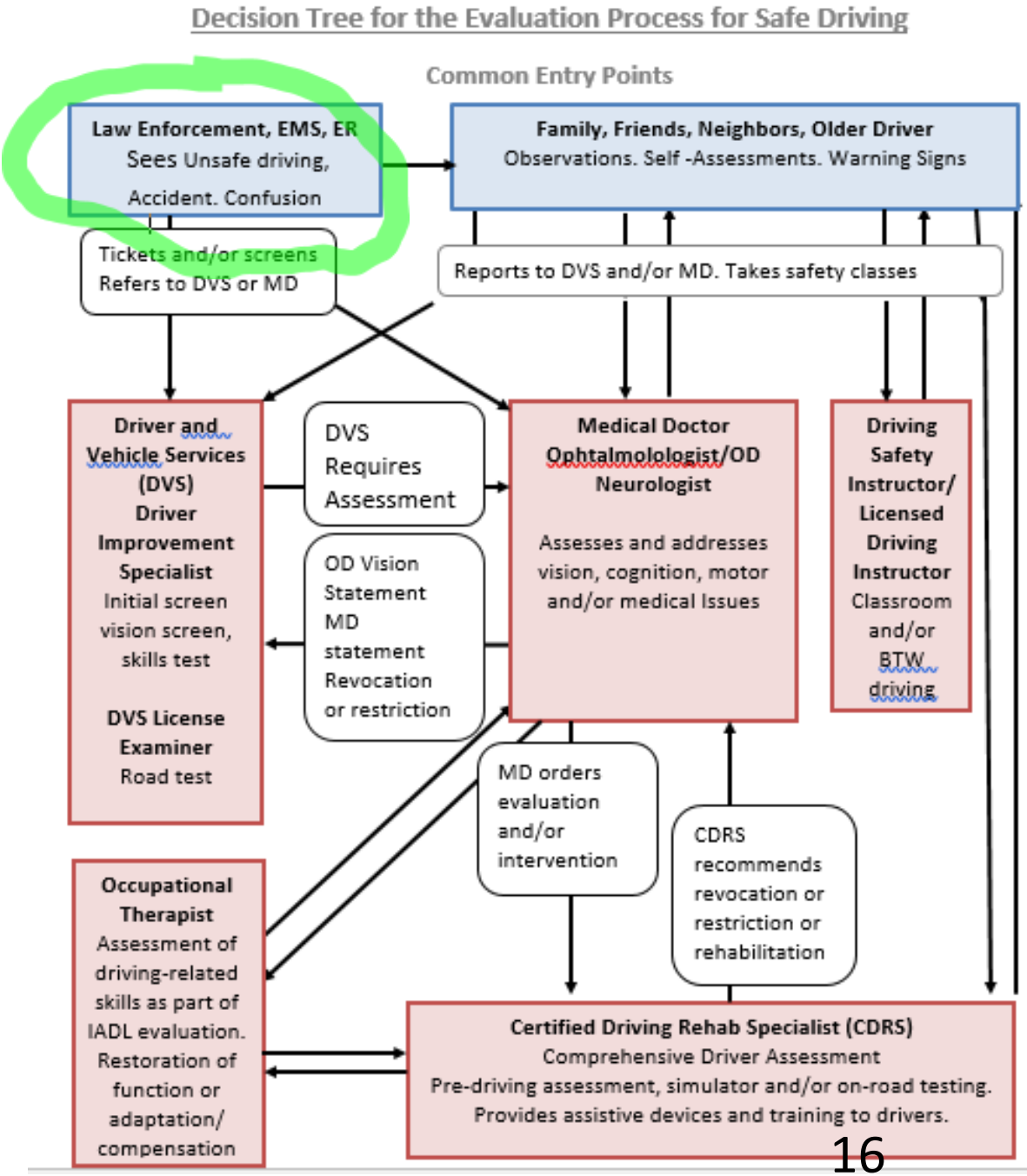


Families as Stakeholders

- Research shows that family concern is highly predictive of failing on-road driving test
- Newly developed tool first called *Fitness to Drive Measure* is well validated tool
  - The FTDS is a web-based tool that can help families detect older drivers at risk.
  - Family of older drivers are asked to rate their difficulties with 54 driving skills
  - The FTDS Measure can be accessed, for free online http://fitnesstodrive.phhp.ufl.edu/ . Easy to use and well received by families
- Next steps for family if some concern but low risk
  - Encourage older driver safety refresher courses
  - Schedule visit with patient's MD and accompany driver to bring up safety concern
- Next steps if high risk concern
  - Encourage driver to limit/stop driving. Tools: At the Crossroads, Alz org
  - Refer directly to DVS. Can be done anonymously link
  - Schedule an assessment directly with CDRS AOTA search Driving Rehab Specialist

First Responders: Law Enforcement and EMS

- First responders play a key role in the identification of older drivers at risk.
- Older drivers with cognitive impairment are more likely to drive erratically
  - Drive too slow or too fast
  - Do not stay centered in their lane
  - Problems merging
  - Fail to yield at intersections,
  - Get lost (gas station scenario)
- It is important to assess both cognitive and physical status



Case study

- Robert was pulled over by an officer for weaving and a rolling stop on a Thursday evening. The officer had followed Robert for a short time before pulling him over and also noted Robert's speed had varied from 10 mph below the speed limit to 5 mph above the speed limit when driving through a commercial area (i.e. strip malls, several restaurants and moderate traffic).
- Robert was disoriented, was not able to state where he was traveling from but stated he was headed home
- **What happens next?**

First Responders: Identify Possible Medical Issues

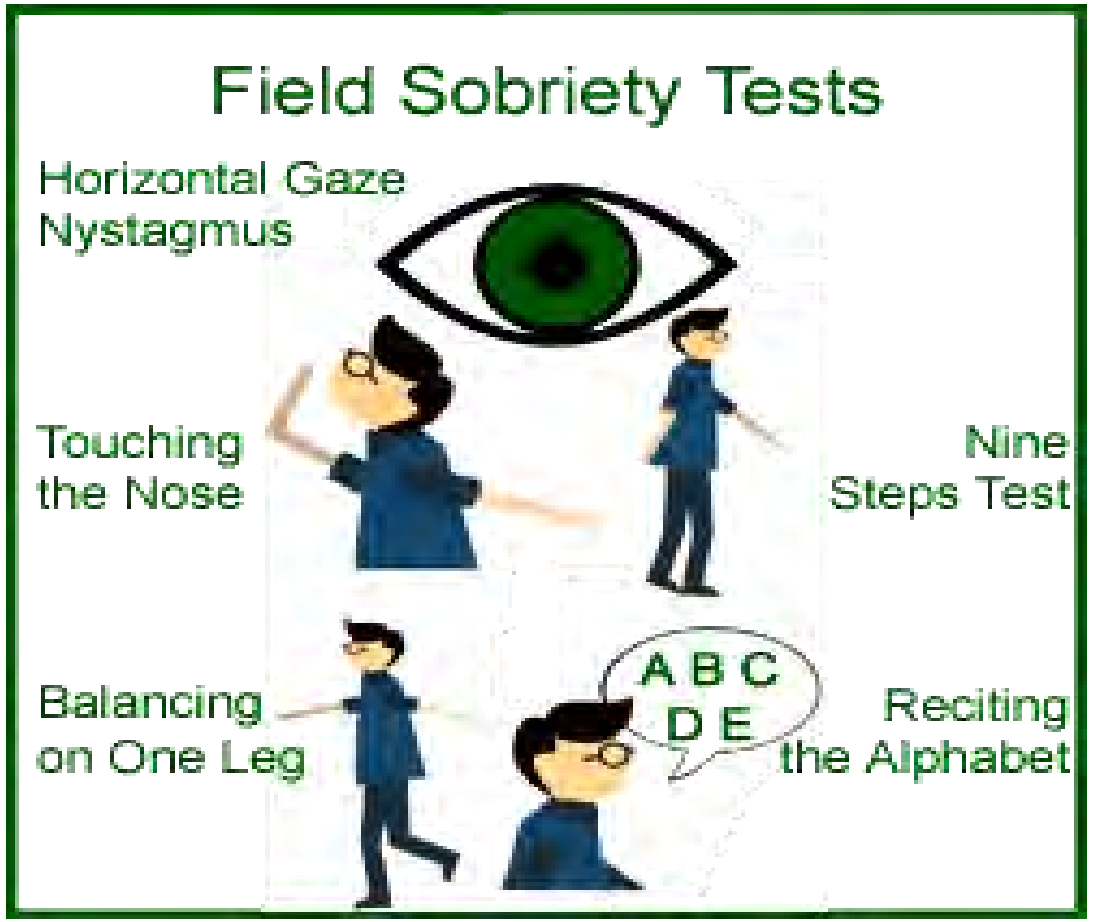
- Substance use/abuse (see sobriety test)
- Diabetes: Low blood sugar
- Dizziness, heart attack
- Syncope (lost consciousness)
- Low oxygen levels/carbon monoxide
- Fever or hypothermia
- Stroke? FAST acute stroke sign

Look for Physical Issues that may Lead to Impaired Driving

- Can be observed during sobriety test
- Motor ability:
  - Standing up
  - Walking
- Vision
  - Reading
  - Distance
- Flexibility
  - Buckle/unbuckle seatbelt

Source: http://www.nhtsa.gov/Driving-Safety

Field Sobriety Testing



SFST SCORING SHEET
(CHECK ALL THAT APPLY)

Horizontal Gaze Nystagmus

- ☐ Are you wearing glasses or contacts?
- ☐ I'm going to check your eyes.
- ☐ Stand with your feet together, with your hands by your side.
- ☐ Follow the stimulus with your eyes, but do not move your head. Focus on the stimulus until I tell you stop.
- ☐ *Hold stimulus approx. 12" to 15" in front of face.*
- ☐ CHECK EQUAL TRACKING & PUPIL SIZE.
  - Equal Tracking ☐ Yes ☐ No
  - Equal Pupil Size ☐ Yes ☐ No

CLUES:	LEFT	RIGHT
*Lack of Smooth Pursuit 2 seconds out; 2 seconds back	☐	☐
*Distinct Nystagmus @Maximum Deviation Hold minimum of 4 seconds	☐	☐
*Onset of Nystagmus Prior to 45 Degrees Move at speed taking 4 seconds	☐	☐
*Vertical Nystagmus Hold approx. 4 seconds	Yes	No

TOTAL SCORE: ☐ (Decision Point: 4; Max: 6)

Walk and Turn:

Instruction Stage:

- ☐ Place your left foot on a line, (real or imaginary) and put your right heel against the toe of the left foot.
- ☐ Place your arms by your sides.
- ☐ Maintain this position and do not do anything until I tell you to start.
- ☐ Do you understand?

Walking Stage:

- ☐ When I tell you to start, take nine heel-to-toe steps along a line, and nine heel-to-toe steps back down the line.
- ☐ On the ninth step, keep your front foot on the line & turn by taking several small steps with the other foot.
- ☐ Keep your arms by your side, count your steps out loud, and keep watching your feet.
- ☐ Once you begin to walk, do not stop until the test is completed.
- ☐ Do you understand?

CLUES

- *Can't balance during instructions ☐
- *Starts too soon ☐
- *Stops while walking ☐
- *Misses heel to toe ☐
- *Steps off the line ☐
- *Uses arms to balance ☐
- *Turned improperly ☐
- *Wrong number of steps ☐

- ☐ Cannot perform test (test stopped or not requested for suspect's safety). Assign all 8 clues.

TOTAL SCORE: ☐ (Decision Point: 2; Max: 8)

One Leg Stand:

Instruction Stage:

- ☐ Stand with your feet together.
- ☐ Keep your arms by your side.
- ☐ Maintain that position until told to do otherwise.
- ☐ Do you understand?

Balance & Counting Stage:

- ☐ When I tell you to start, raise one leg approximately 6 inches off the ground, foot pointed out.
- ☐ Keep both legs straight, arms at your side
- ☐ Keep your eyes on the elevated foot.
- ☐ While holding that position, count out loud (one thousand-one, one thousand-two) until told to stop. This test will take approx. 30 seconds.
- ☐ Do you understand?

CLUES

- *Sways ☐
- *Uses arms to balance ☐
- *Hops ☐
- *Puts foot down ☐

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TOTAL SCORE: ☐ (Decision Point: 2; Max: 4)

Alternate Tests:
50 pounds overweight OR over 65 years of age OR if injury is claimed

Alphabet :
Result:_____
_____

Finger Count: 1,2,3,4; 4,3,2,1; each finger to thumb
Result:_____
_____

Rhomberg: Close your eyes, tilt your head back, hands at your side, stop after 30 seconds
Result: _____
_____

Hand Clap: Count to 10; front and back of palm is one #
Result: _____
_____

Nose Touch: Close eyes; touch tip of nose with tip of index finger as instructed (call out "right" or "left")
Result: _____
_____

PBT Result:_____ ☐ Refused PBT

- ☐ Suspect is **not** intoxicated
- ☐ Suspect **is** intoxicated due to:
  - ☐ Alcohol ☐ Drugs ☐ Both

Field Sobriety Testing

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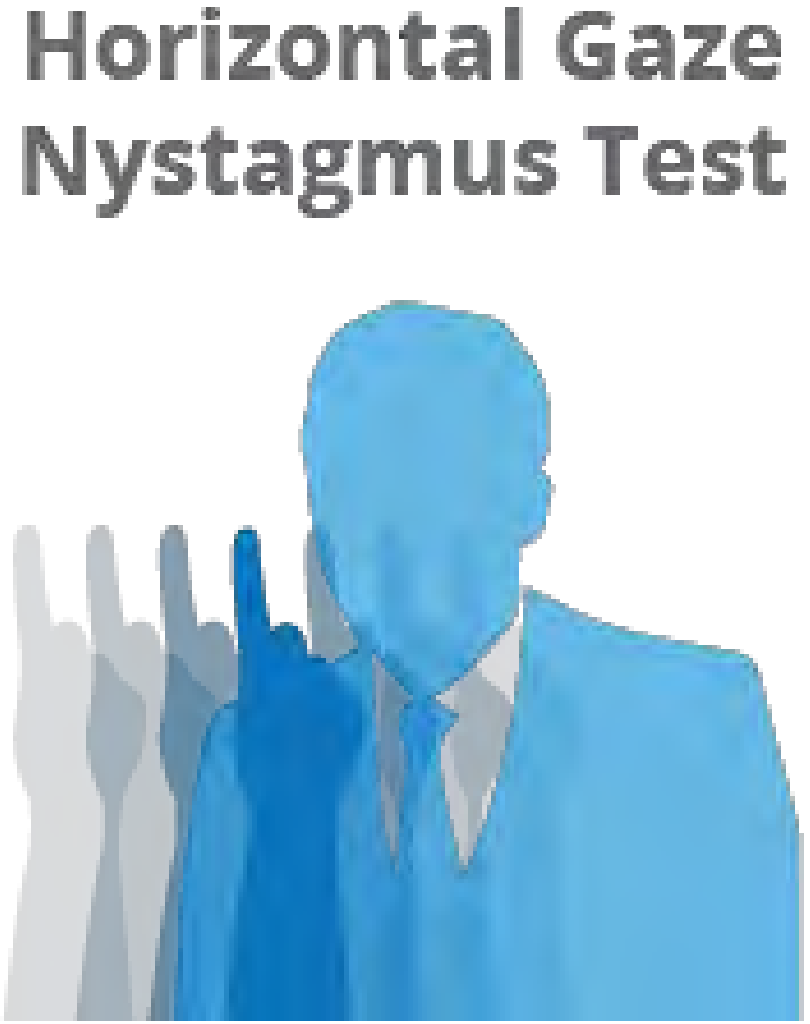

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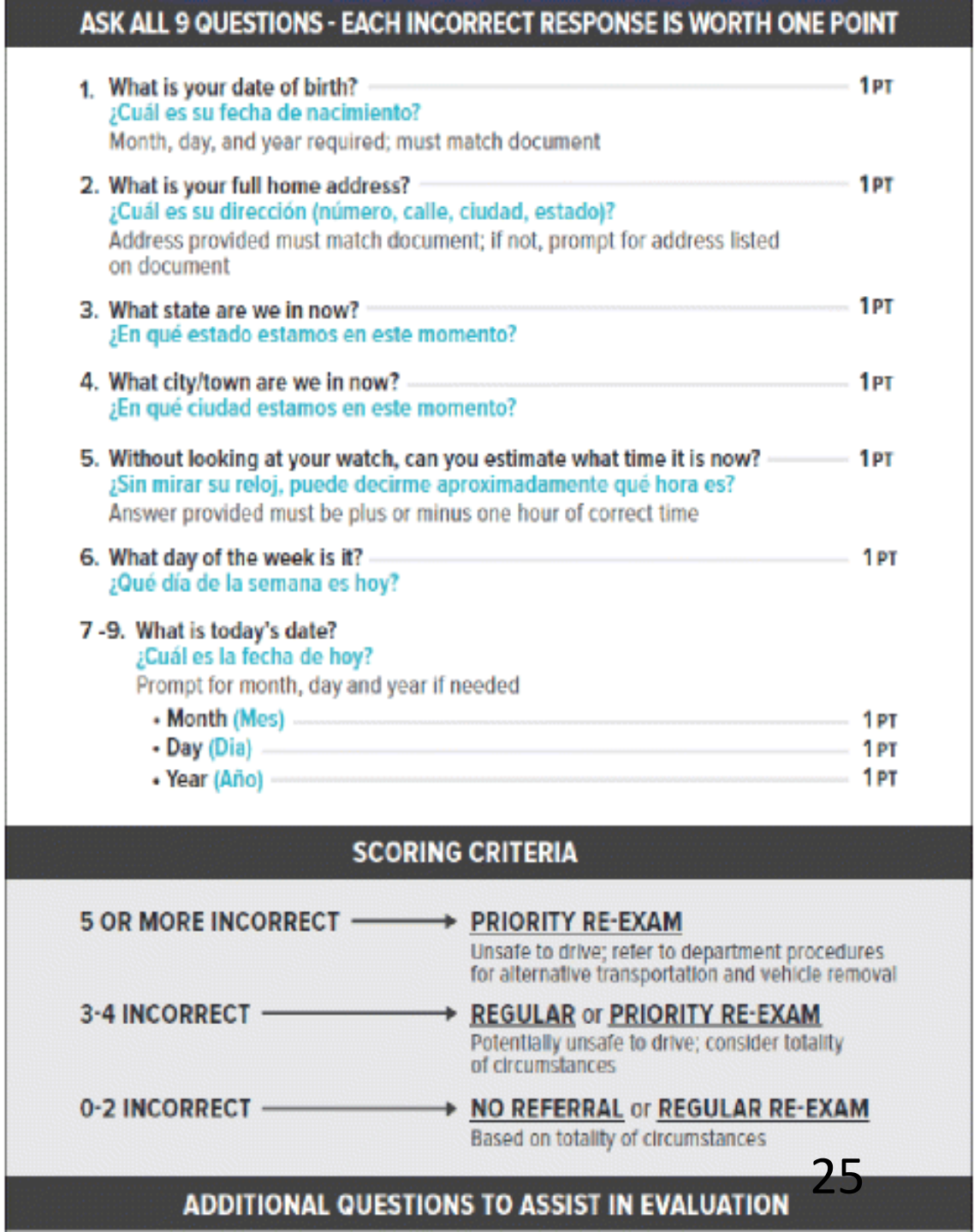
Field Sobriety Testing

Is the person "failing" the test for other - AKA medical reasons?

Was there a cognitive reason for impaired driving?

DOSCI TOOL

- The Driver Orientation Screen for Cognitive Impairment (DOSCI) is easy screen for cognition that can be used at the roadside
- 5 or more wrong means the driver is unsafe and should get alternative ride and be reported as priority.
- Tool was developed and validated in California in the context of and educational curriculum for state troopers
- Validation study article Link



ASK ALL 9 QUESTIONS - EACH INCORRECT RESPONSE IS WORTH ONE POINT

1. **What is your date of birth?** — 1 PT
   ¿Cuál es su fecha de nacimiento?
   Month, day, and year required; must match document
2. **What is your full home address?** — 1 PT
   ¿Cuál es su dirección (número, calle, ciudad, estado)?
   Address provided must match document; if not, prompt for address listed on document
3. **What state are we in now?** — 1 PT
   ¿En qué estado estamos en este momento?
4. **What city/town are we in now?** — 1 PT
   ¿En qué ciudad estamos en este momento?
5. **Without looking at your watch, can you estimate what time it is now?** — 1 PT
   ¿Sin mirar su reloj, puede decirme aproximadamente qué hora es?
   Answer provided must be plus or minus one hour of correct time
6. **What day of the week is it?** — 1 PT
   ¿Qué día de la semana es hoy?
7. -9. **What is today's date?**
   ¿Cuál es la fecha de hoy?
   Prompt for month, day and year if needed
   - **Month** (Mes) — 1 PT
   - **Day** (Día) — 1 PT
   - **Year** (Año) — 1 PT

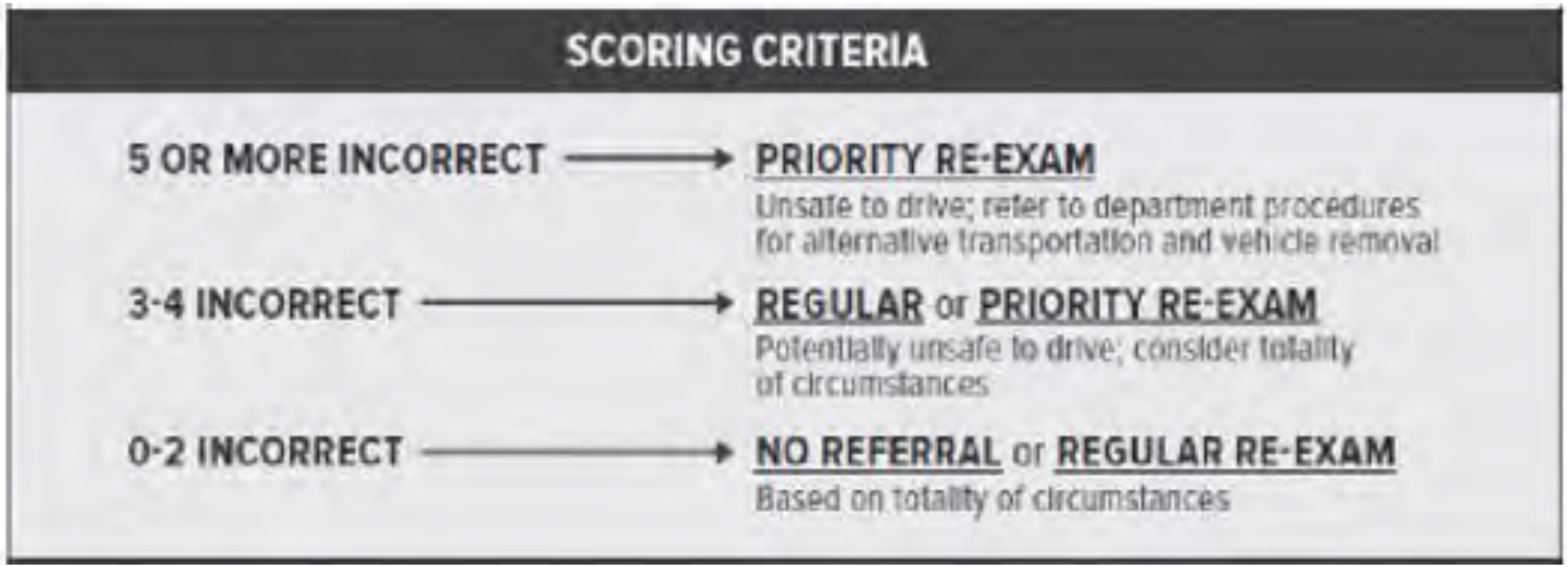
SCORING CRITERIA

5 OR MORE INCORRECT →	PRIORITY RE-EXAM Unsafe to drive; refer to department procedures for alternative transportation and vehicle removal
3-4 INCORRECT →	REGULAR or PRIORITY RE-EXAM Potentially unsafe to drive; consider totality of circumstances
0-2 INCORRECT →	NO REFERRAL or REGULAR RE-EXAM Based on totality of circumstances

ADDITIONAL QUESTIONS TO ASSIST IN EVALUATION

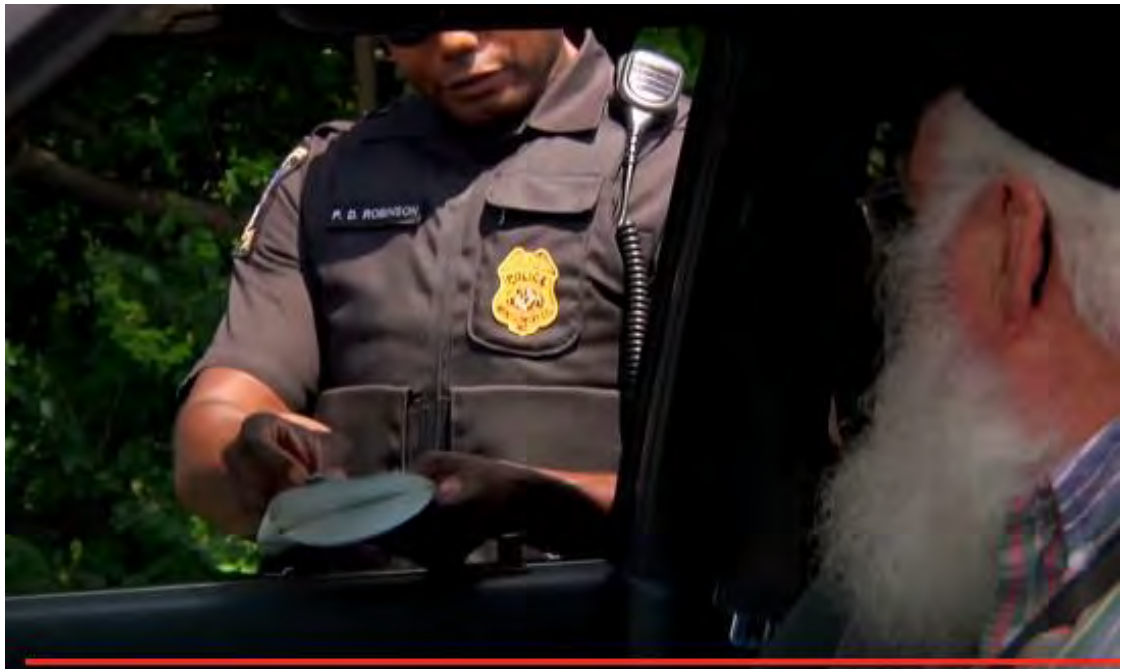
DOSCI Tool (cont.)

- Scoring for referral to DMV



Next Steps for Law Enforcement

- **Citation**: Important to ticket older drivers if driving violations. It helps families and older drivers see red flag.
- **Report to DMV** for further assessment if score of 3 or more on DOSCI tool
- **Write down observations** of problem behavior and results of screen (i.e. score and level of risk on DOSCI tool)
- **Call family or friend** to pick up driver
- **Call EMS** : If likely presence of medical condition or family cannot be reached



Source: http://www.nhtsa.gov/Driving-Safety

Other tools and Resources for Law Enforcement

- IACP quick screen http://www.theiacp.org/portals/0/pdfs/AlzheimersVisorCard.pdf
- IACP 10 warning sign a driver may have Alzheimers http://www.theiacp.org/portals/0/documents/pdfs/IACP-AlzheimerPocketcard.pdf
- Short training video for law enforcement to recognize impaired driving due to Alzheimer's or other dementias http://www.theiacp.org/Alzheimer-Training-Video
- NHTSA short video on medical conditions for Law enforcement https://www.youtube.com/watch?v=s0N9S4GC7nI

EMS, Emergency Dept. Staff, & the Older Driver

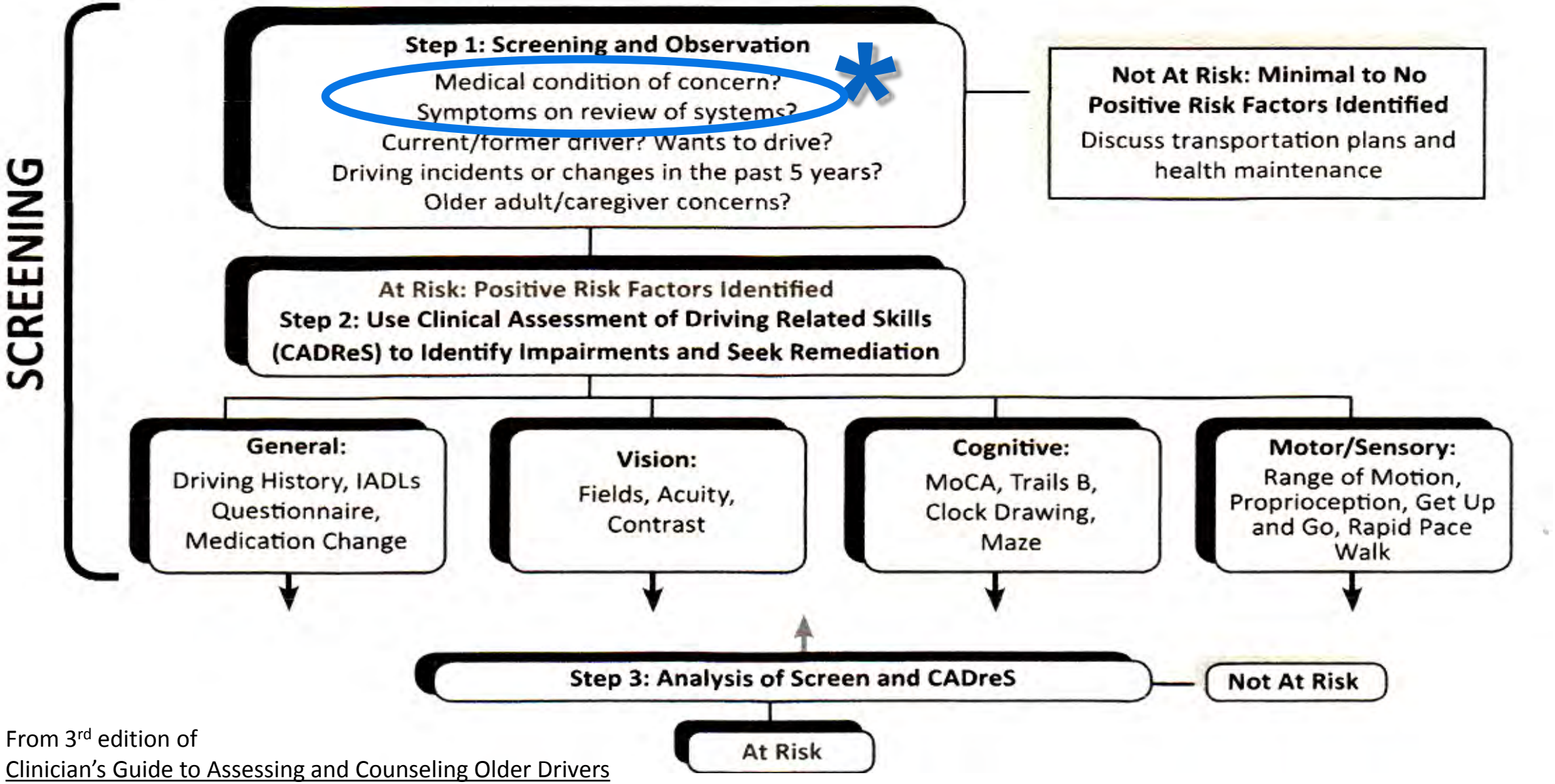
Law enforcement calls you to assess an older driver found at side of road, or you noted poor driving, or you realize that a patient is going to drive home them self and you have concerns about safety. Do you have tools to assess the situation?

Remember – you are screening NOT diagnosing!

You have several options……

keep in mind, you are screening to see if it is safe to let the person get behind the wheel right now. If they can pass the skills, it is most likely OK to let them drive, if they are having trouble, they need further evaluation by experts!

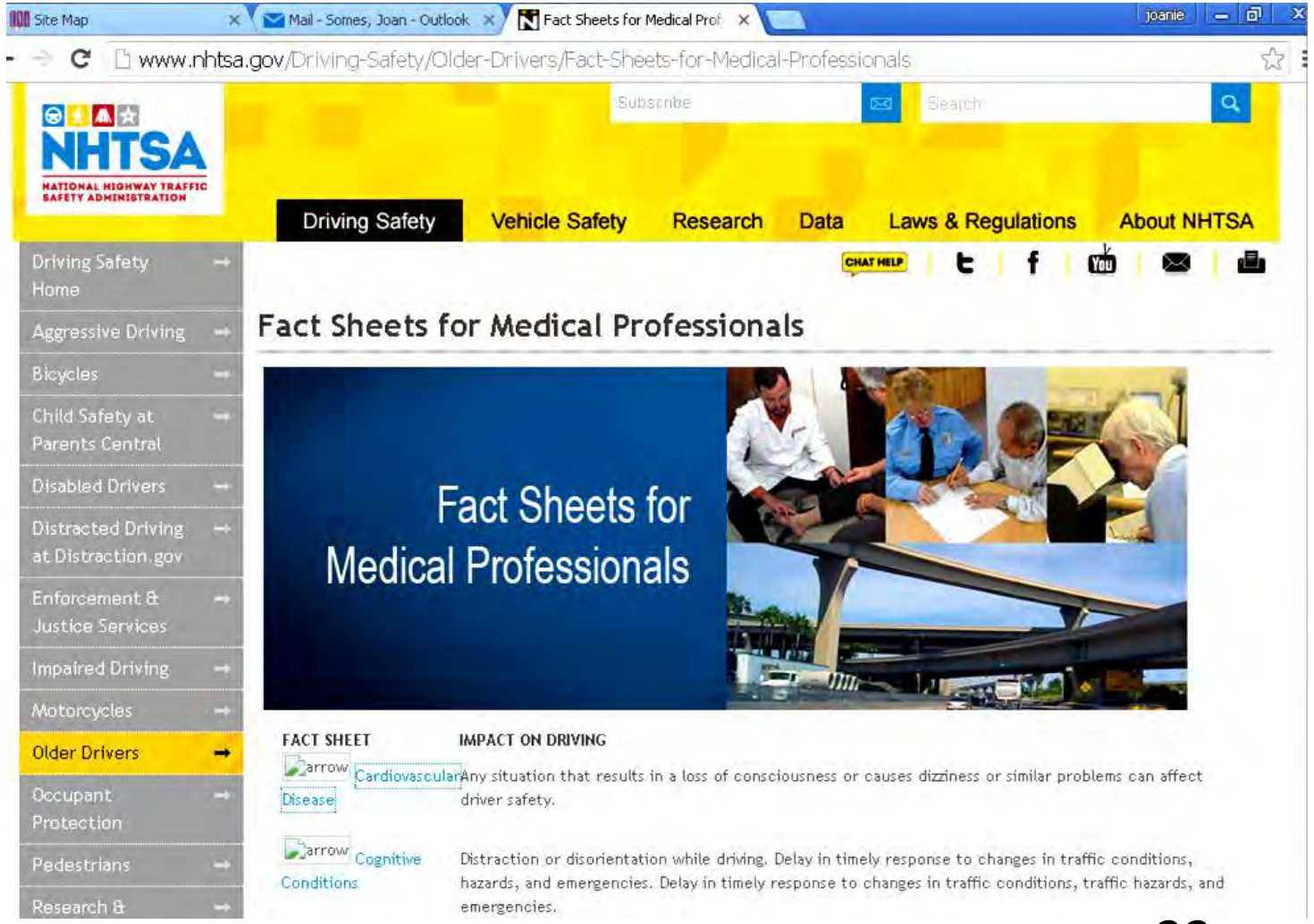
Plan for Older Drivers' Safety (PODS)



From 3rd edition of
Clinician's Guide to Assessing and Counseling Older Drivers
Published by AGS and NHTSA Jan, 2016

Step One: Rule out medical conditions that may lead to issues when driving

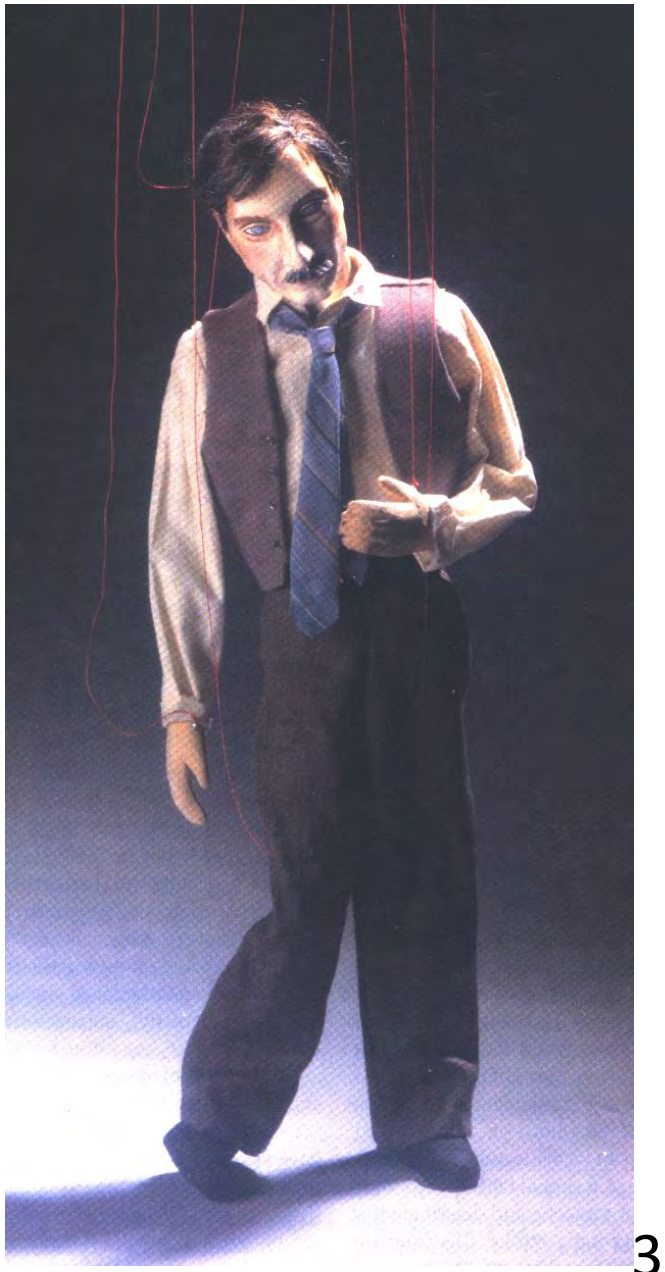
- Cognitive conditions
- Cardiovascular
- Diabetes
- Depression
- Functional conditions
- Physical limitations
- Seizures
- Sleep disorders
- Vision problems



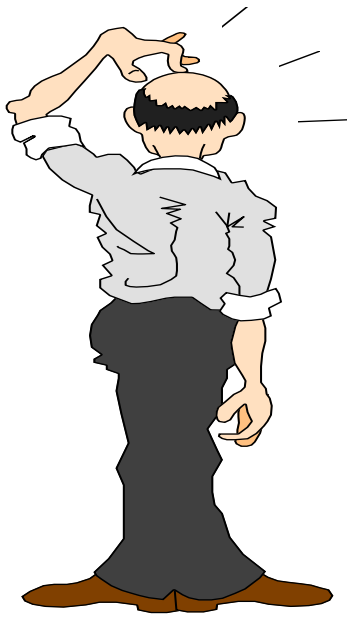
*** NHTSA's list**

Other Symptoms…..

- General ~ fatigue, weakness, dizziness
- HEENT ~ vision changes, headache, vertigo
- Respiratory ~ Short of Breath, us of Oxygen
- Cardiac ~ chest pain, palpitations, loss of consciousness, increased swelling in legs, rhythm problems, lightheadedness
- Musculoskeletal ~ pain, weakness, joint stiffness, decreased range of motion
- Neurologic ~ stroke, seizure, tremor, paralysis, numbness, tingling, weakness
- Psychiatric ~ anxiety, mania, psychosomatic

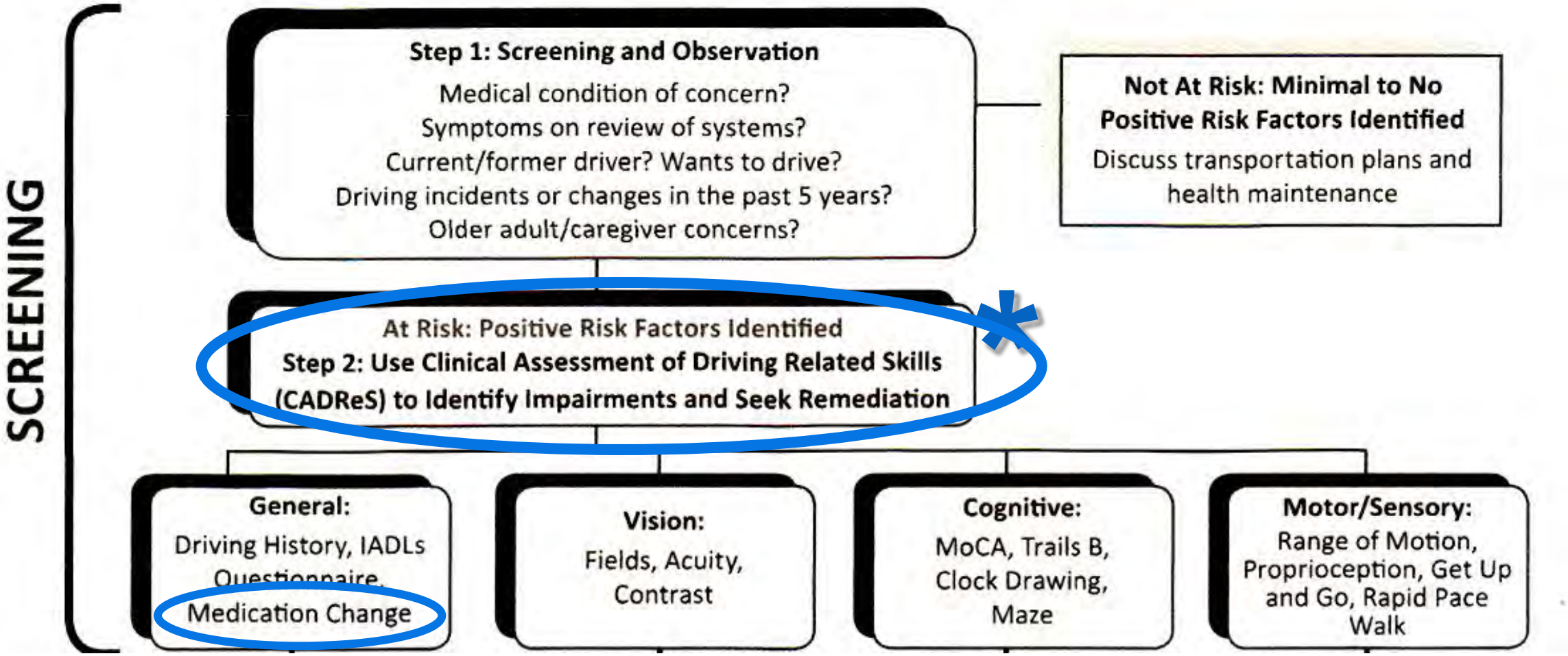


Careful observation is important step in screening. Emergency room clinicians should observe the older adult and be alert to:



- Sensory issues such as impaired vision, hearing or decreased sensation in the extremities
- Inattention or loss of insight regarding personal care (e.g., poor hygiene and grooming)
- Difficulty with way finding (e.g., getting to or out of the office, or going to restroom)
- Impaired attention, memory, language expression, or comprehension
- Get input from caregivers on: Difficulties or lack of insight related to managing medical encounters, such as missed appointments, repeated phone calls for the same issues, or appearing on the wrong day.

Plan for Older Drivers' Safety (PODS)



Assess driving related skills based on current condition finding safe ride home if unsafe and a referral for follow-up and reassessment!

Medications the person is taking may cause sedation or impaired cognition affecting driving safety

- Anticholinergics
- Anticonvulsants
- Antidepressants
- Antiemetics
- Antihistamines
- Antiparkinson
- Antipsychotic
- Benzodiazepines
- Muscle relaxants
- Narcotic analgesics

These medications may be new for the patient who is not aware of effects!

www.roadwiserx.com

Roadwise Rx

Your tool for understanding how medications may affect you and your driving.

Change Text Size

Enter your medications below

Begin typing the name of a medication that you are currently taking below and then select it from the list. Once you have entered all your medications, both prescribed and over-the counter, click "View Results."

WHAT IS ROADWISE RX?

Begin typing the name of a medication or herbal supplement...

NEED HELP

DRUG NAME	GENERIC NAME

View Results »

Legal Disclaimer

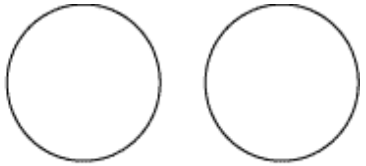
License & Warranty

Have questions about Roadwise Rx? Email roadwiserx@aaafoundation.org

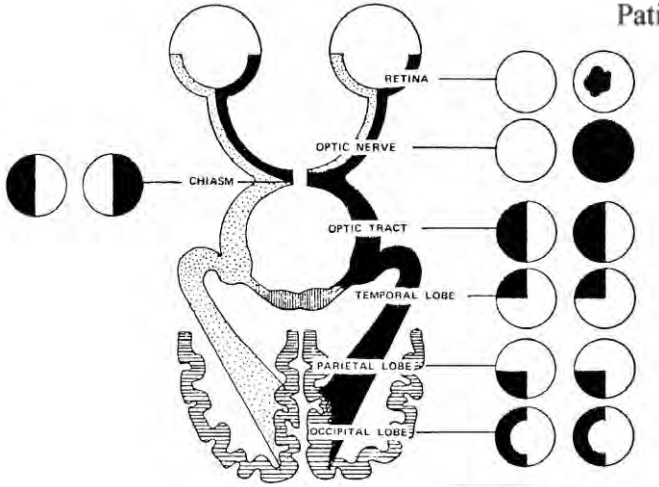
For over 60 years, the AAA Foundation for Traffic Safety has conducted research to support education that advances safety and wellbeing for all road users.

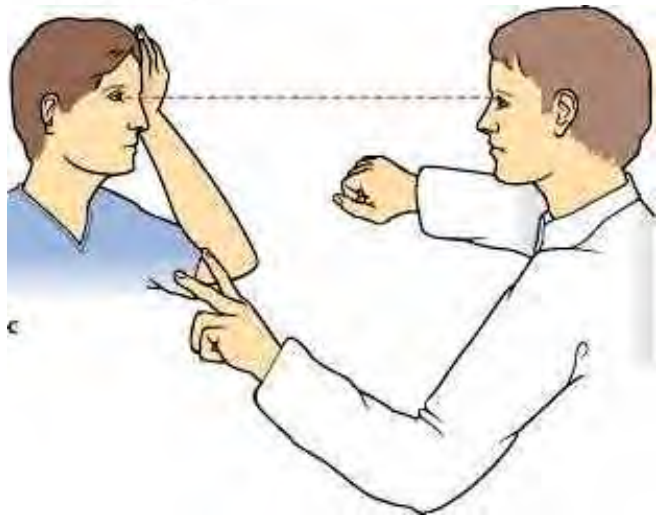
Assess Vision and Cognition

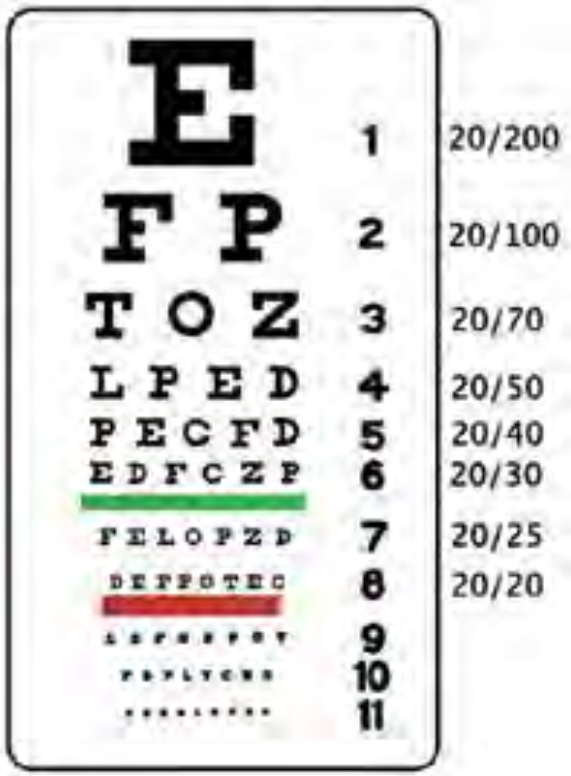
1. **Visual fields:** Shade in any areas of deficit.



Patient's R L







2. **Visual acuity:** _____ OU OS OD

Was the patient wearing corrective lenses?

If yes, please specify:

_____

Mini Cog test (3-min valid screen for cognitive status)

1. Three word registration

Listen carefully , I am going to say three words that you will need to say to me now & remember. (Pick one list below.)

Version 1	Version 2	Version 3
banana	leader	village
sunrise	season	kitchen
chair	table	baby

Version 4	Version 5	Version 6
river	captain	daughter
nation	garden	heaven
finger	picture	mountain

3. Three word recall

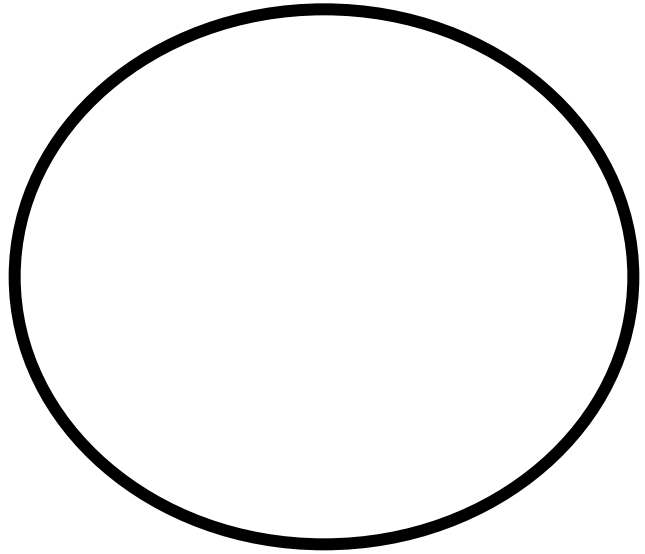
Ask the person to recall and tell you the three words from before.

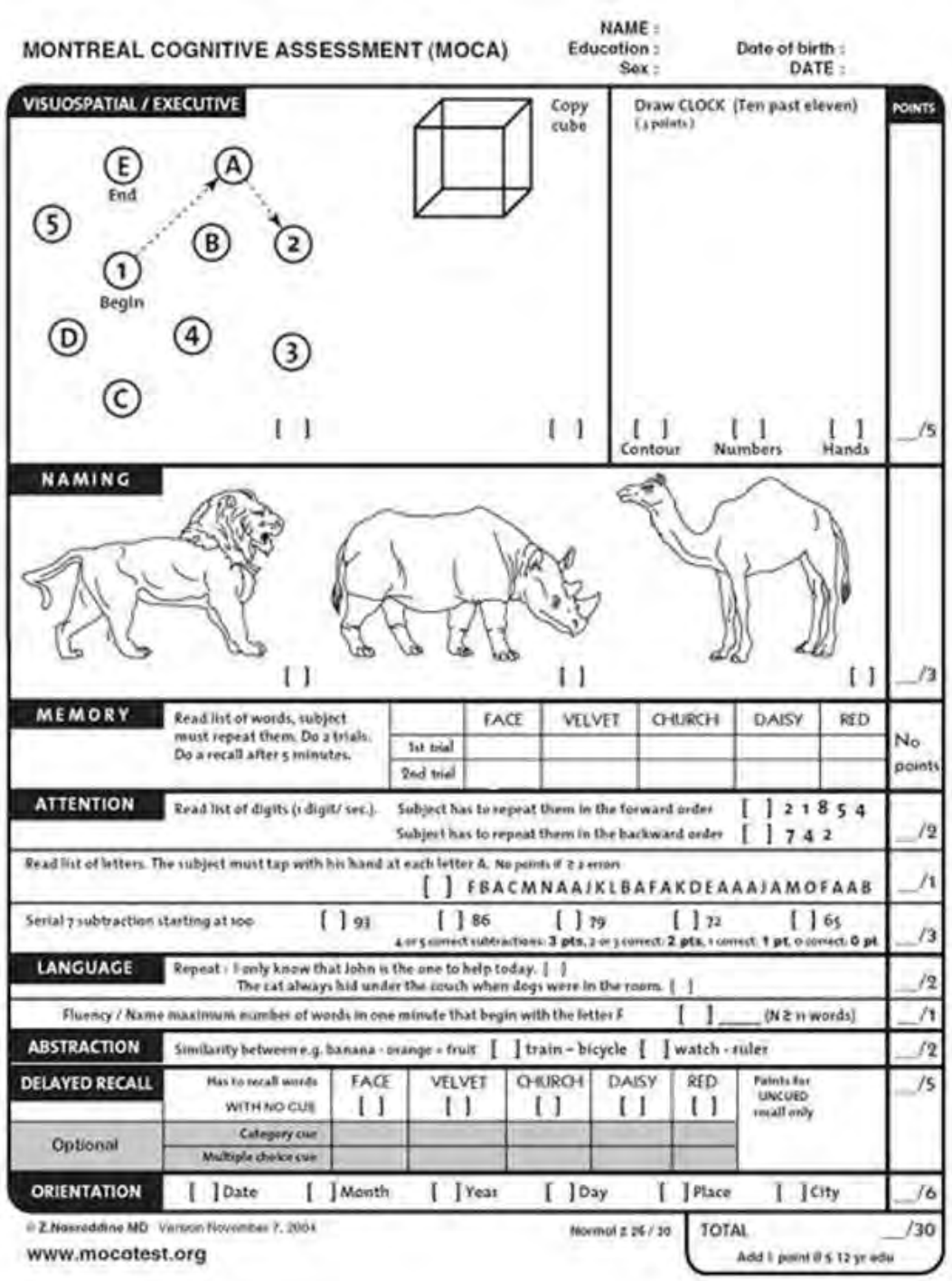
Word version list____ person's answers

_____ _____ _____

2. Clock drawing

Draw a clock, put in all the
Numbers where they go
Set hands to 10 to 11




MONTREAL COGNITIVE ASSESSMENT (MOCA)

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

VISUOSPATIAL / EXECUTIVE

Copy cube

Draw CLOCK (Ten past eleven) (3 points)

Contour
Numbers
Hands

POINTS /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
		[ ]	[ ]	[ ]	[ ]	[ ]	
Optional	Category cue						
	Multiple choice cue						

/5

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

© Z.Nasreddine MD Version November 7, 2004
Normal ≥ 26 / 30
TOTAL /30
Add 1 point if ≤ 12 yr edu

www.mocatest.org

MoCA is 10-15 min cognitive screen. Can help predict driving risk in people with diagnosis of cognitive impairment.

A score on the MoCA of 18 or less should raise concerns about driving safety.

Hollis, A. M et al. J Am Geriatr Soc. 2015;63(5):988-992.

Clock drawing test: Please check ‘yes’ or ‘no’ to the following criteria.

	Yes	No
All 12 hours are placed in correct numeric order, starting with 12 at the top		
Only the numbers 1-12 are included (no duplicates, omissions, or foreign marks)		
The numbers are drawn inside the clock circle		
The numbers are spaced equally or nearly equally from each other		
The numbers are spaced equally or nearly equally from the edge of the circle		
One clock hand correctly points to two o’clock		
The other hand correctly points to eleven o’clock		
There are only two clock hands		

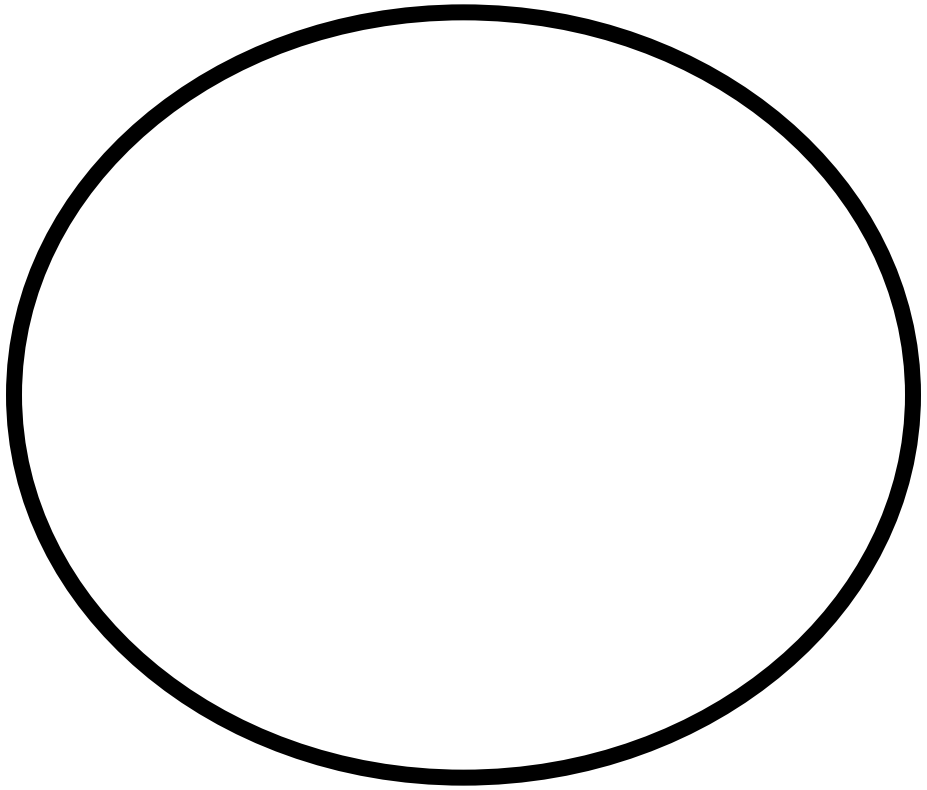
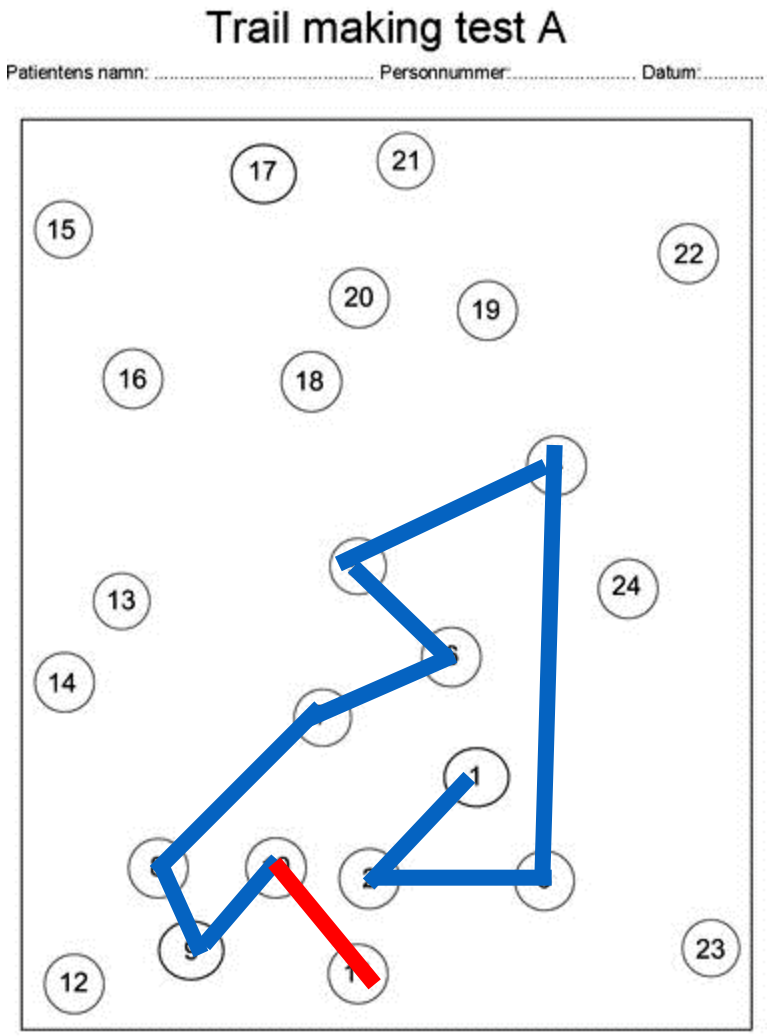
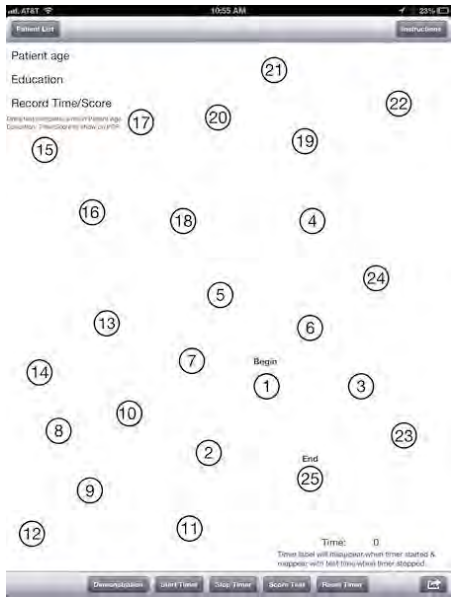


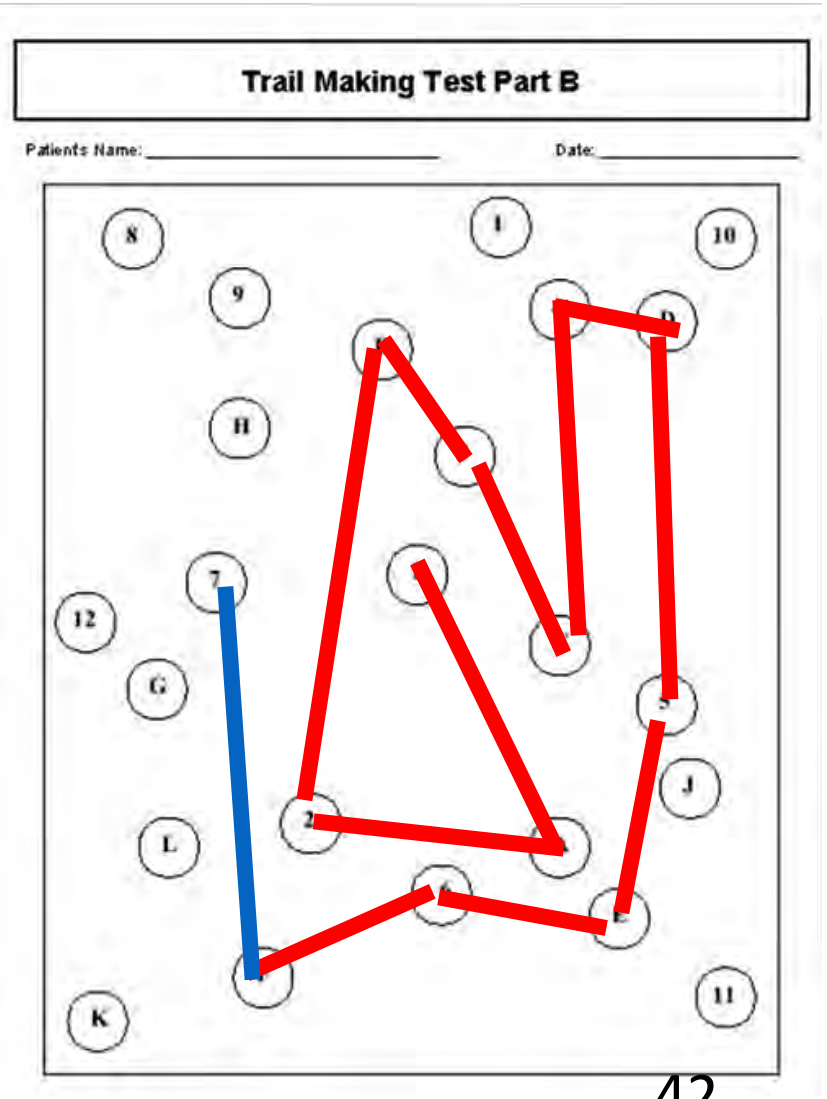
Fig. 3. Improvement following toxic delirium

Trail-Making Test, Part B: _____ seconds

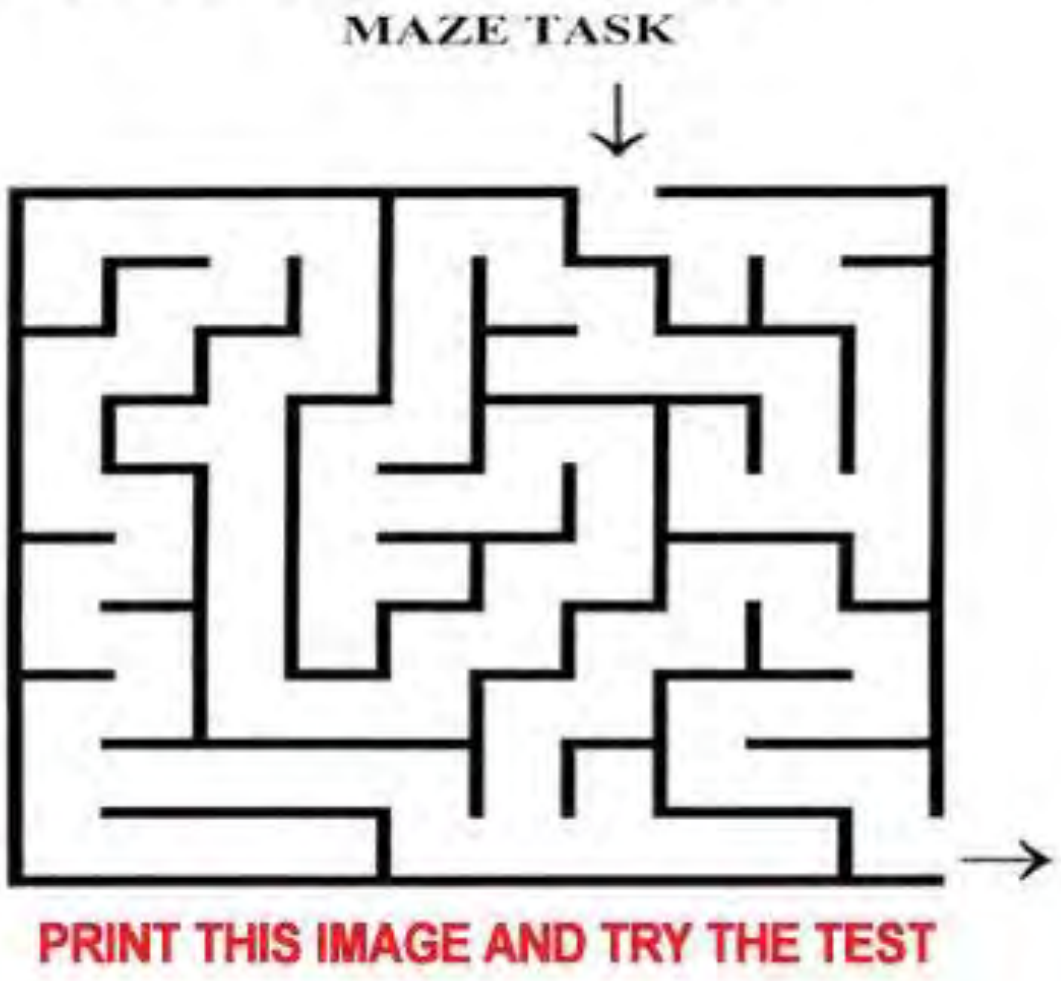


There is an app for that!





Maze


A TEST FOR DRIVERS
MAZE TASK
PRINT THIS IMAGE AND TRY THE TEST

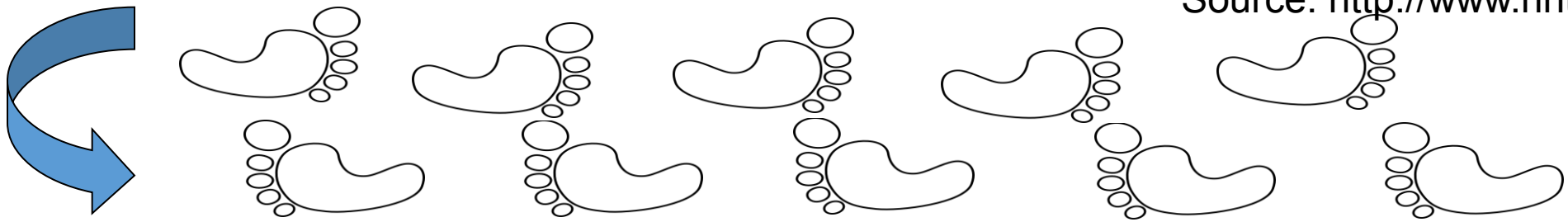
Assess Physical Ability

Get up and Go:
Rise from chair, walk 10 feet, turn around, walk back, turn & sit

Rapid pace walk: _____ seconds
Was this performed with a walker or cane?
If yes, please specify:

_____
___

Source: http://www.nhtsa.gov/Driving-Safety



Range of motion:

Specify ‘Within Normal Limits’ or ‘Not WNL.’

If not WNL, describe.

	Right	Left
Neck rotation		
Finger curl		
Shoulder and elbow flexion		
Ankle plantar flexion		
Ankle dorsiflexion		

Source: http://www.nhtsa.gov/Driving-Safety

Motor strength:

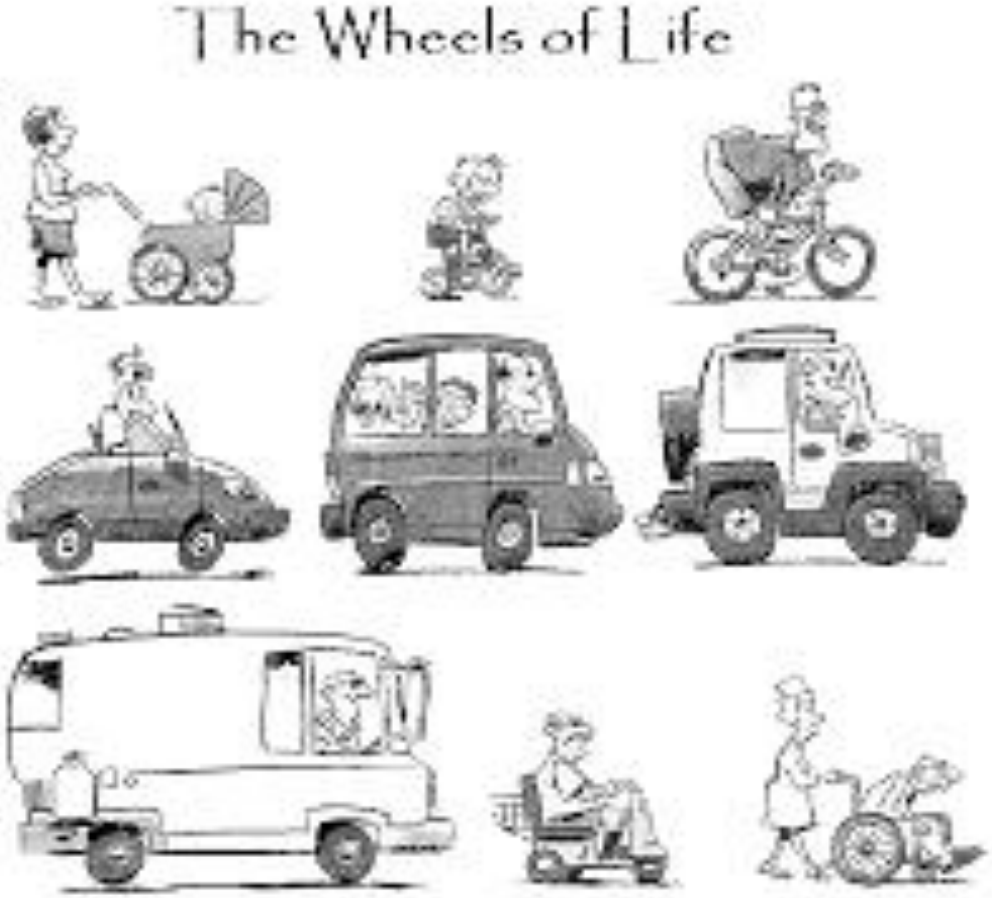
Provide a score on a scale of 0-5.

	Right	Left
Shoulder adduction		
Shoulder abduction		
Shoulder flexion		
Wrist flexion		
Wrist extension		
Hand grip		
Hip flexion		
Hip extension		
Ankle dorsiflexion		
Ankle plantar flexion		

Source: http://www.nhtsa.gov/Driving-Safe

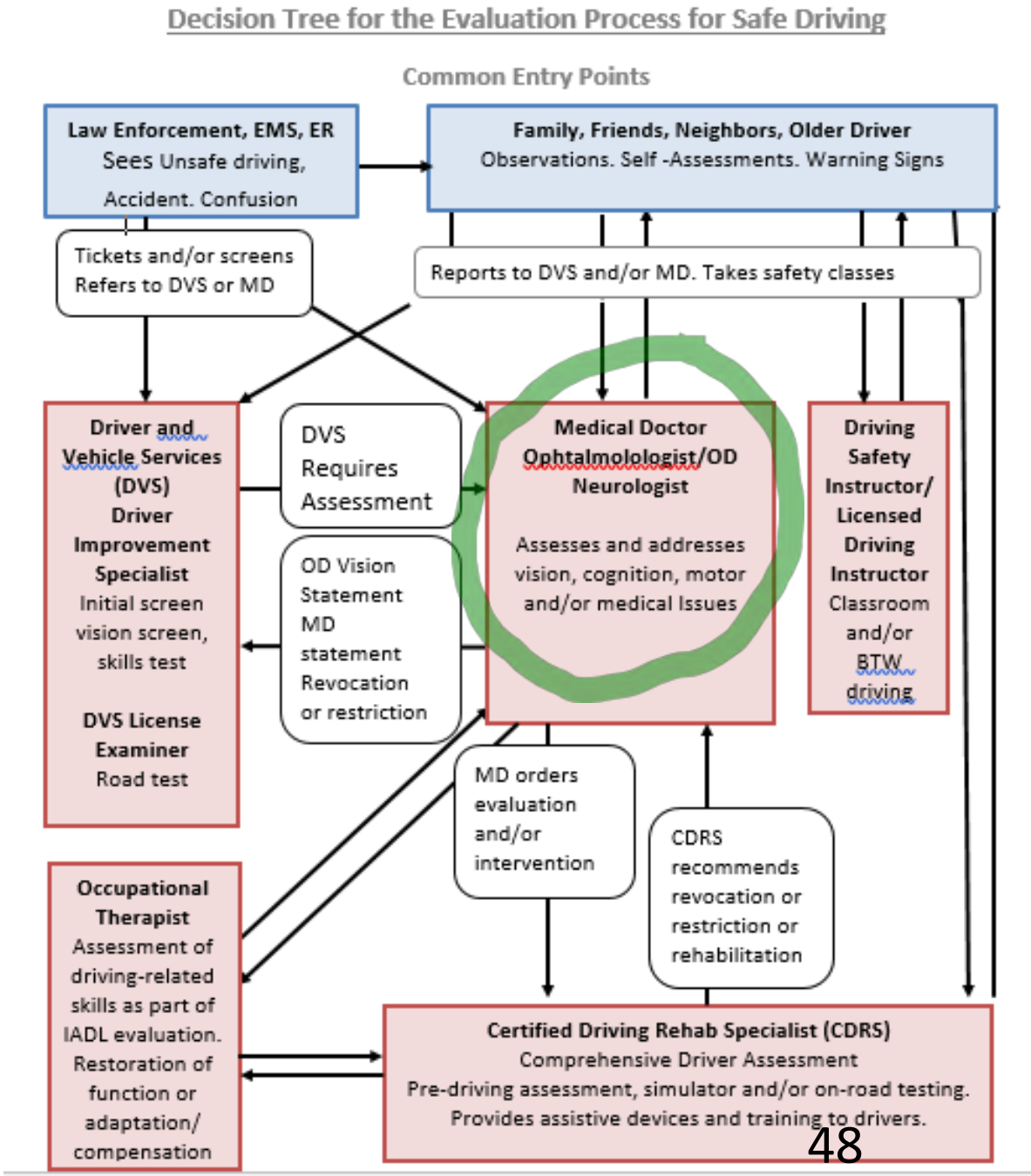
Options if the patient does not do well during screening.

- Know that limitations may be situational (due to stress) and could improve later
- Call family or friend for ride
- Share concern with family & patient
- Report to primary MD
- Report to Driver & Vehicle services. Not mandatory in MN but recommended
- Suggest Certified Driving Rehab Specialist evaluation
- **Remind patient – not a final diagnosis, but a current safety issue**



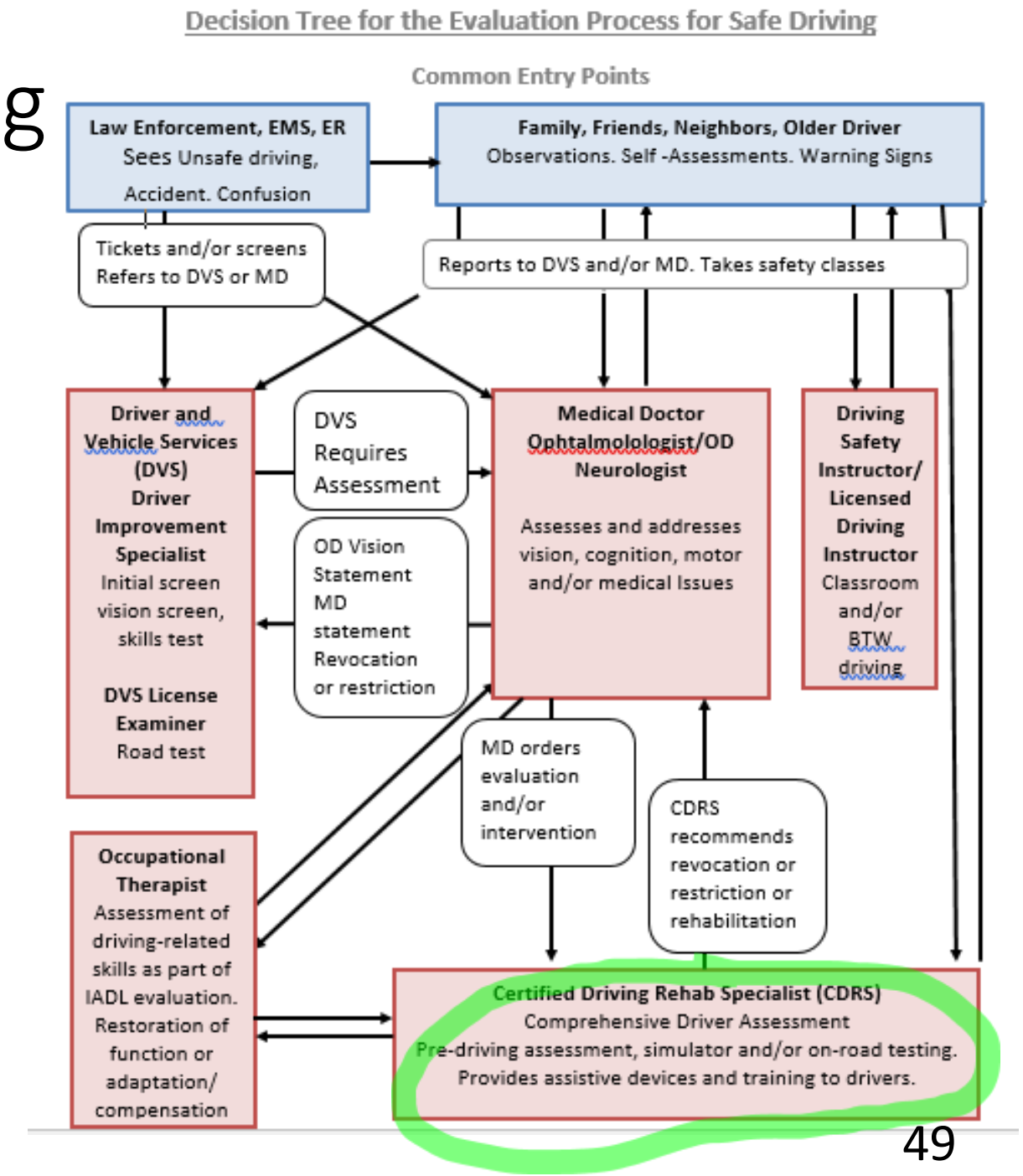
MD, OD, Neurologist

- Medical professionals involved in testing older drivers following referral from many sources:
  - DVS, as related to licensing
  - Concerned family members
  - Drivers themselves following recommendation from, community member and friends
- → MD may do assessments or refer to Specialist and/or OT/CDRS for testing.
- → MD alone communicates with DVS for licensing renewal recommendations



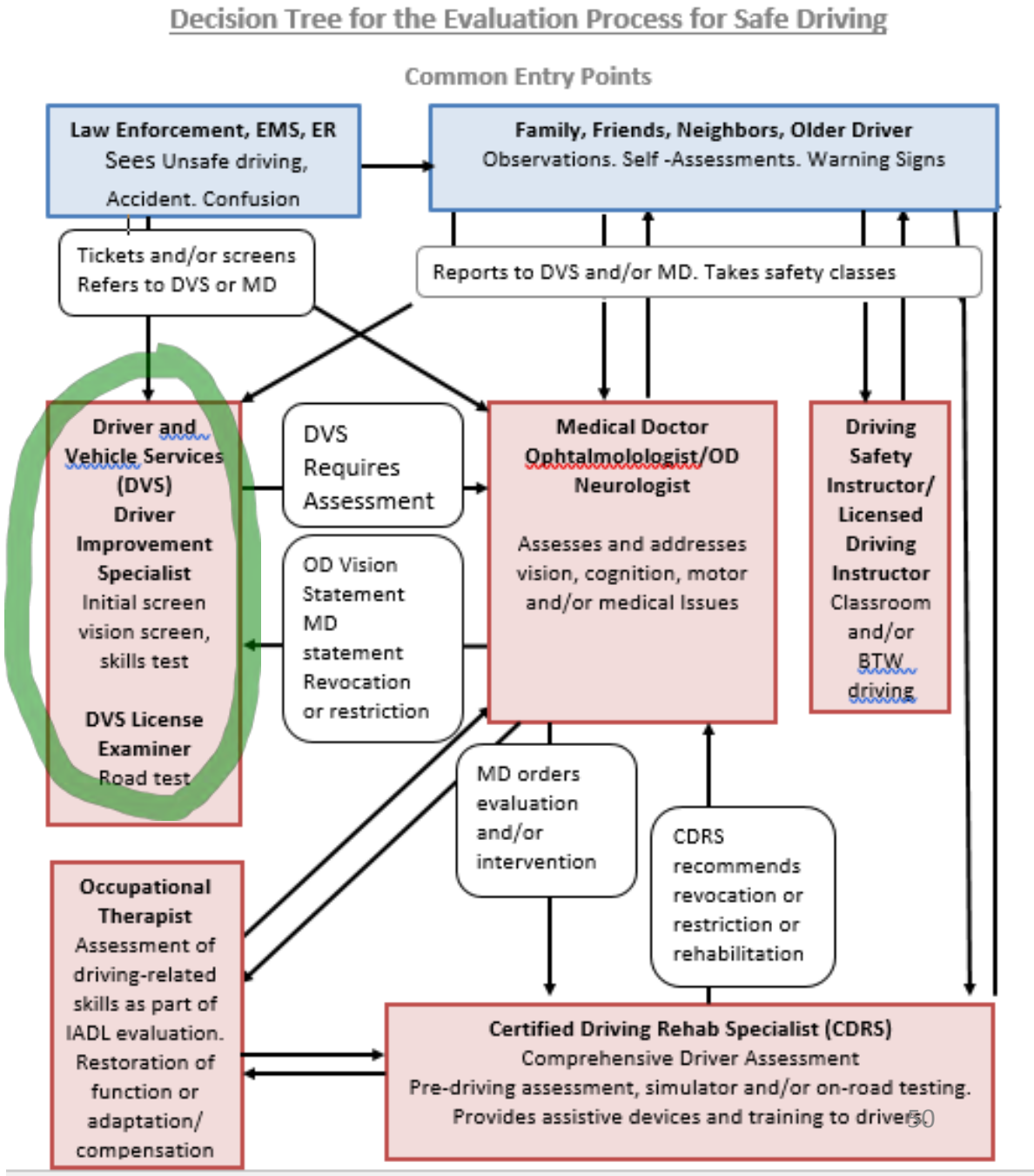
Interaction MD and Driving Rehabilitation Specialists

- See Jennifer Fisher's presentation



DVS and Assessment

- DVS has Legal Authority to restrict or remove license if driver deemed unfit to drive
- Assesses driver following referral or at license renewal time
- Use vision screen, knowledge test and/or behind the wheel test
- → May refer to MD for further assessment
- States vary in how DVS assesses cognition and what they do when cognitive issues are identified.



DVS and Cognitive Screening

- Some DVS use computerized cognitive screens (i.e.) UFOV, DriveAble link Clock-drawing link, Trails B link but not Minnesota. Knowledge test used for all ages.
- In-person renewal used in Minnesota may be informal way to assess cognition. Research shows that in person renewal is linked to decreased crash risk
- In some countries and some US states, MD and other health professionals are mandatory reporters: Can be held liable in case of accident if it was caused by an unfit driver they did not report to the DVS. Not in Minnesota.
- Research shows that those laws have mixed effectiveness in reducing crash rates. Concern is that it tends to make people stop before they need to stop
- Cognitive screens do predict on-road performance and crash risk, but they are best predictors if used in combination, during multi-tiered assessment process.

Example of DVS 3-Tiered System of Assessing Older Drivers at Risk

- Since no single cognitive test can predict driving risk, some states have implemented a multi-tiered assessment process. For example in California:
- Tier 1 is brief and consists to four easy to administer tools:
  - DMV's current Snellen test of visual acuity.
  - Chart-based test of contrast sensitivity.
  - Brief cognitive screen (recalling social security number).
  - Structured observations for physical limitations.
- If pass Tier 1: Do the computerized DVS road knowledge test in Tier 2.
- If fail Tier 1: Do computerized test of processing speed (UFOV) and computerized road knowledge test
- If pass Tier 1 but fail road knowledge test, also do UFOV test.
- Complete source: Link

Discussion

- Some possible issues to raise during discussion:
  - Do, and should EMS report unsafe drivers to DVS?
  - Are there HIPPA issues if they do so? Is there a way to report without violating HIPPA?
  - Right now, family members can report problem driver anonymously to DVS. Should concerned neighbors and medical personnel also have anonymity?
  - Right now, only MD communicate directly with DMV to recommend license restriction or revocation. Should CDRS be able to communicate directly with DVS based on their behind the wheel assessment? Should liability laws be implemented to facilitate this reporting?
  - Should formal cognitive assessments be part of the process at the DVS?
  - Should a multi-tiered system be instated in MN, similar to a California model?