

Optimizing Safe Driving Among the Elderly

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Disclosure:

I have no disclosure

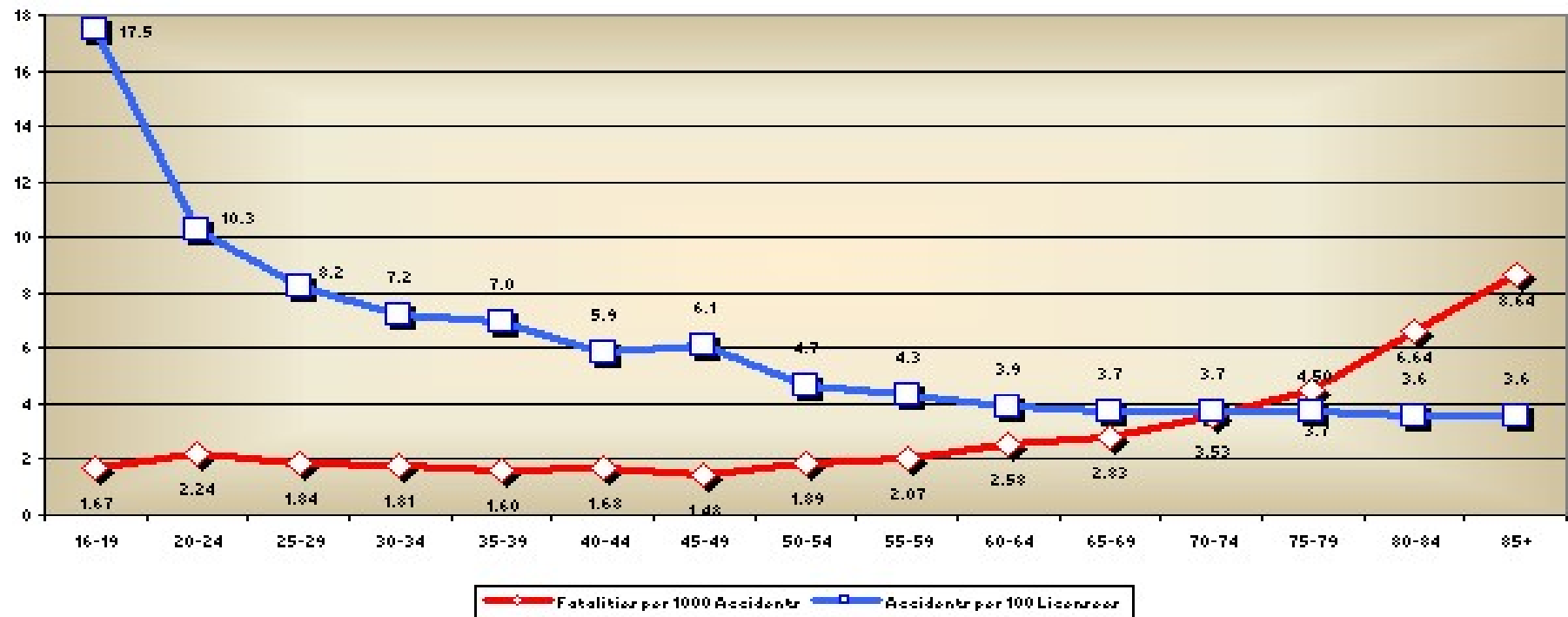
Objectives

- Screen and Assess older driver
 - Office tools
- Ethics and legal issues.
- Resources specific to Michigan State.

Introduction

- The U.S. older adult population older than 65 reached 43 million in 2012 and is expected to double by 2050. There will be 53 million driver > 65 years by 2020.
- Approximately 86% of Americans 65 and older continue to drive.
- In 2012, there were 5,560 people 65 and older who were killed and 214,000 who were injured in motor vehicle crashes
- Motor vehicle crashes are the second most common cause of injury after falls.
- The fatality rate for drivers 85 and older is 9 times higher than the rate for drivers 25 to 69 years old.

Figure 2: Driver Accident Involvements and Fatalities by Age Group
Adapted From 1995 NPTS



A 99 y/o male who comes today with his son for a regular office visit.

PMH is significant for DMII complicated with peripheral neuropathy , Alzheimer dementia, A fib on anticoagulation, seizure, HTN, and hyperlipidemia. During the appointment his son verbalizes concern about his father driving skills. He noticed that he hesitates when he makes left turns. Patient has no concerns. He had no traffic tickets nor near collisions in the past 5 years.

What is the most concerning point in the past scenario that indicates urgent evaluation ?

Remember !!!!

Age alone is not a red flag for driving safety

Who should not drive?

OUR GOAL

**Optimizing safe driving
rather than:**

Simply stopping older adults from driving.

Primary prevention:

- Assesse the older adult driver
- Intervene to prevent the loss of driving ability.

Secondary prevention:

- Asses issues that have already caused the loss of driving skills.
- Attempt to restore those skills through treatment and rehabilitation.

Tertiary prevention:

- Identify when irreversible loss of driving skills has occurred.
- Include recommending alternatives to avoid harm to the older adult and others when driving is no longer an option.

Screening Versus Assessment

Screening

Screening for unsafe driving requires the use of simple tools to identify the possibility of risk.

Assessment

Assessment requires more in-depth evaluation to distinguish between individuals who are truly at risk and those who are not.

History

- Patient's history and reviewing the medical record.
- Always be sure to ask about this key instrumental activity of daily living.
- Examine the current list of medications.
- Perform a comprehensive review of systems (h/o falls, sleep disorder; OSA).

Observe

- Sensory deprivation 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).
- Impaired ambulation (e.g., difficulty walking or getting into and out of chairs).
- Difficulty with way finding (e.g., getting to or out of the office).
- Impaired attention, memory, language expression, or comprehension.
- 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.

Ask about driving skills

- How did you get here today? Do you drive?
- How much do you drive?
- Do you drive to the store? hairdresser? bank?
- Do you drive at night?
- Have you lost any confidence in your ability to be a safe driver?
- Have others expressed concern about your driving ?

Ask about driving skills, cont.

- Do you often get lost while driving?
- Have you received any traffic violations or warnings in the past 2 years?
- Have you had any accidents or near-accidents in the past 2 years?
- If your car ever broke down, how would you get around? Is there anyone who can give you a ride? Can you use public transportation, such as a bus or train? Does your community offer a shuttle service or volunteer driver service?

Functional Areas Assessed for Driving

Vision

includes assessment of visual acuity, visual fields, and contrast sensitivity.

Cognition

includes functional assessments of memory, visual perception/processing, attention, executive function, language, and insight .

Motor and Somatosensory Function

includes functional assessments of functional range of motion, proprioception, and endurance.

Vision

- Decline in acuity is related to physiologic changes of the eye that occur with age.
- Medical conditions such as cataracts, glaucoma, diabetic retinopathy, and age-related macular degeneration (ARMD).
- Most research studies show that visual acuity is not linked to crash risk, which may be because of the variability in visual requirements by State licensing agencies

Vision

Visual Field:

- Natural aging changes such as ptosis, a drooping of the eyelid most commonly found in the older population.
- Medical conditions such as glaucoma, optic neuritis, detached retina, and stroke/traumatic brain injury.
- Loss of peripheral vision may lead to trouble noticing traffic signs or cars and pedestrians about to cross their path.

Vision

Contrast Sensitivity:

Older adults require about three times more contrast than young adults to distinguish a target against its background

Cognition

▶ Memory:

- Memory tends to decline with age.
- To drive safely, drivers need to remember their destination, how to navigate to the destination, how to operate the vehicle, and to obey traffic rules.

Cognition

Visual Perception/Processing:

- Visual processing may slow, and complex visuospatial skills may decline with age.
- Drivers use it to recognize another vehicle and determine its distance ahead to maintain speed, slow, or stop in relation to that vehicle.

Cognition

- Attentional function may decline with age.
- Driving is a dynamic and changing environment that demands on attention.

Cognition

▶ Executive Function:

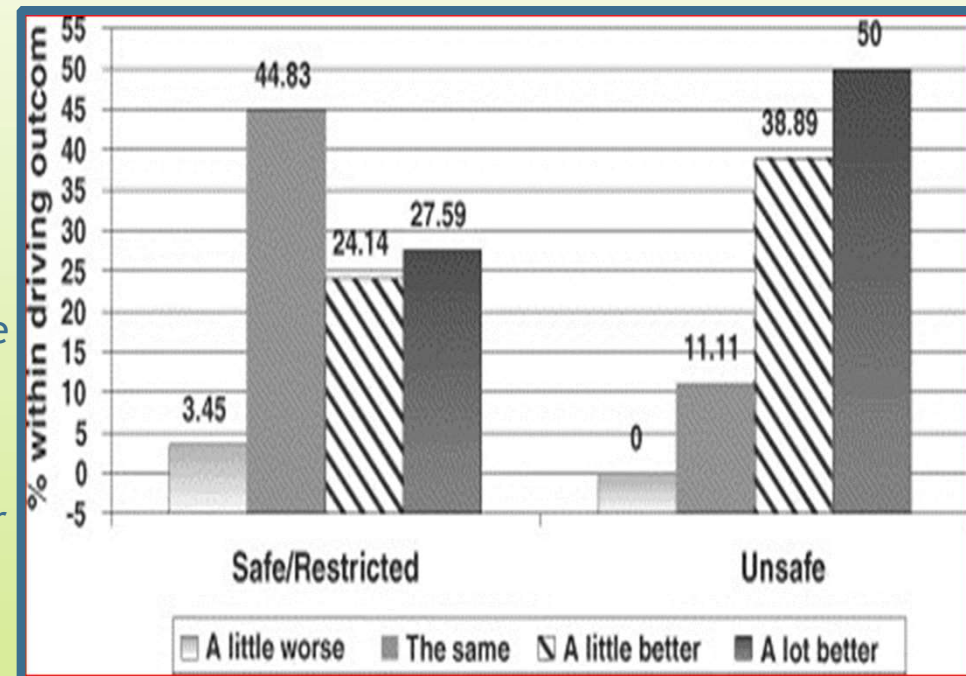
- Refers to the coordination of several cognitive sub-processes to achieve a particular goal.
- The capacity for this kind of logical analysis tends to decline with age.
- Because of the overlearned ability of driving, many drivers with executive function deficits can drive familiar routes without a problem. However, if an unexpected event occurs (e.g., a child running onto the street).

Cognition

▶ Insight:

- Insight is the awareness that a person has about himself or herself, including abilities and limitations.
- Understand their medical problems, and how it affects their driving skills.

- 38% of the drivers tested were found to be unsafe, all unsafe drivers rated their expected driving performance as the same or better than other drivers of their age.
- Drivers who considered themselves at least a little better than others of their age were **more than four times** more likely to be unsafe drivers compared to others who believed they were comparable to or worse than other drivers of their age. (RR = 4.13, 95% CI = 1.08-15.78).

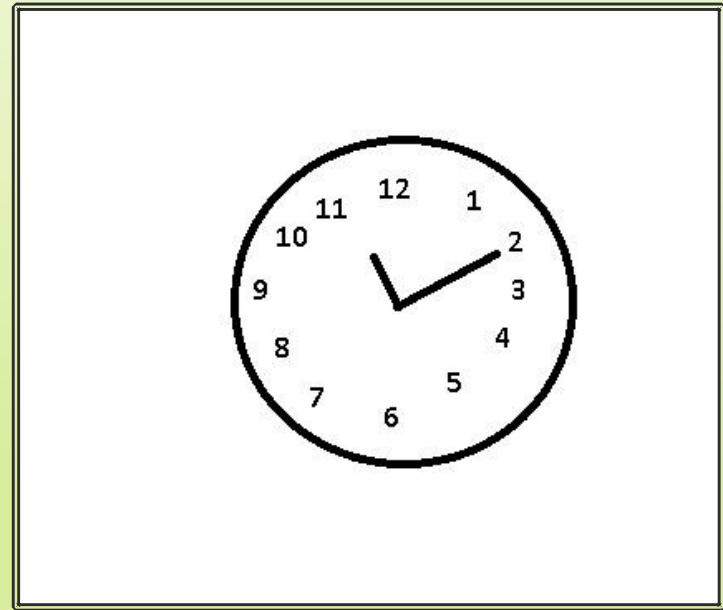
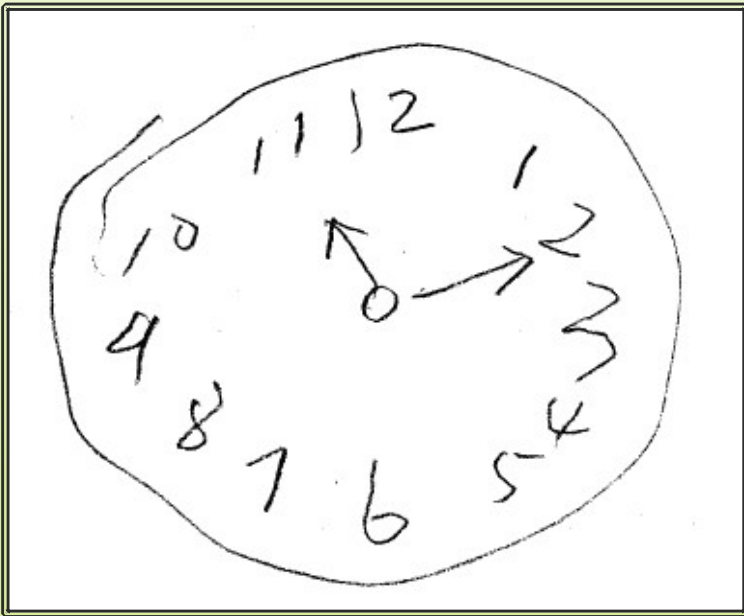


- Barbara Freund, Accident Analysis & Prevention, Volume 37, Issue 4, 2005, 613-618

Screening for cognition deficit

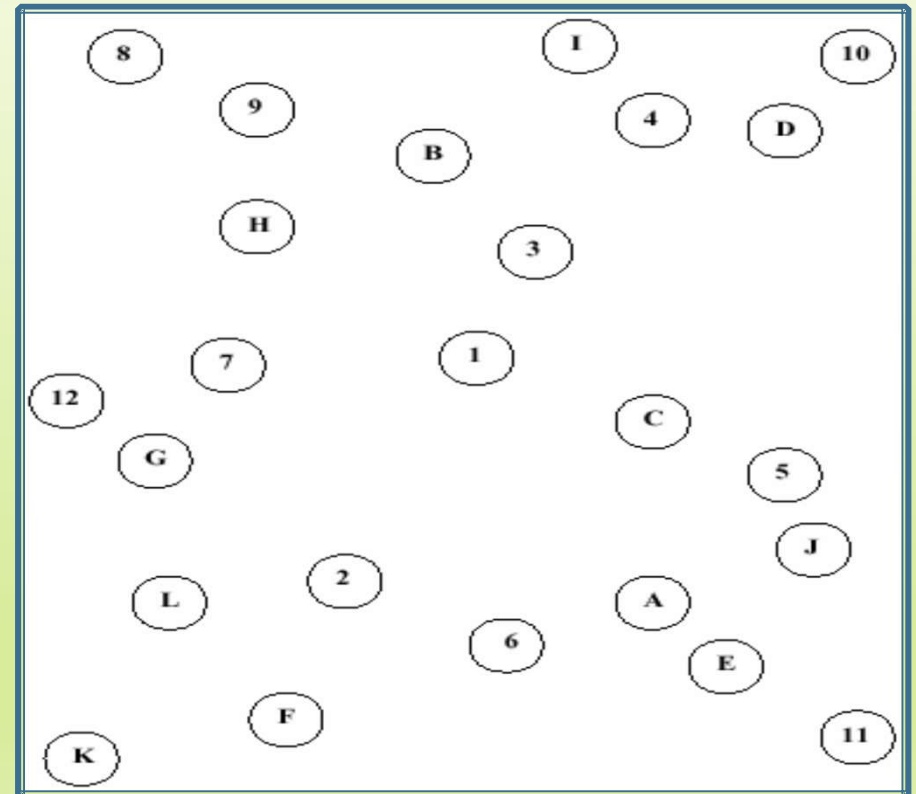
- Montreal Cognitive Assessment (MoCA). Score >26 is normal, Score < 18 is concerning.
- Trails B: This test of general cognitive function also specifically assesses working memory, visual processing, visuospatial skills, selective and divided attention, and psychomotor coordination ([Classen et al., 2013](#)).
- Clock-Drawing Test: This test may assess long-term memory, short-term memory, visual perception, visuospatial skills, selective attention, abstract thinking, and executive skills.
- MMSE ([Crizzle et al., 2012](#)).

Clock draw test



Trail Making Test Part B

- Numbers from 1 to 13.
- Letters from A to L.
- Cut off time is 3 minutes.
- Sensitivity 58%.
- Specificity 78%



Dementia and driving

- Fitness-to-drive studies in older adults with dementia indicate that 90% may be able to pass a road test in the very mild stages of the disease.
- A diagnosis of Alzheimer disease alone is not enough to take driving privilege from your patient.

(Fox GK, Bowden SC, Bashford GM, Smith DS. J Am Geriatr Soc. 1997 Aug;45(8):949-53)

- Most older adults with Alzheimer disease will eventually fail subsequent road tests.
- Repeat testing at 6-12 months should be strongly considered.

Dementia and driving, cont

American Academy of Neurology (2010): Insufficient evidence to support the benefit of neuropsychological testing.

AMA Physician's Guide to Assessing and Counseling Older Drivers (2010) recommended considering road test based on:

- Clock Draw Test
- Trails B

Any cognitive screen that clearly demonstrates the older adult has moderate or severe cognitive impairment is sufficient evidence for a provider to recommend driving cessation.

(Hollis AM, Duncanson H, Kapust LR, Xi PM, O'Connor MG. J Am Geriatr Soc. 2015 May;63(5):988-92. doi: 10.1111/jgs.13384. Epub 2015 May 4)

Motor and Somatosensory Function

Endurance:

- Before the act of driving, motor abilities are needed to enter the car safely and fasten the seat belt.
- The natural process of aging may involve a decline in muscle strength and endurance, flexibility, and joint stability.
- Rapid Pace Walk and Get Up and Go.

Motor and Somatosensory Function

▶ Proprioception:

- Drivers must have the ability to know whether their foot is on the brake or accelerator pedal.

Motor and Somatosensory Function

Functional Range of Motion:

- Drivers must be able to steer.
- Range of motion in the neck is essential so that the driver can turn his or her head quickly to check the blind spot.
- Refer to a physical therapist as needed for training and exercises to improve strength and/or range of motion, or to an occupational therapist if impairment is affecting daily tasks.

Older Adult Drivers can benefit from Driver Rehabilitation Specialists:

- Vehicle modification can be as straightforward as providing extended gear shift levers, padded steering wheels, or extra/larger mirrors ...
- Unfortunately, driver evaluation and rehabilitation services may not always be readily available in the local area. the older adult may refuse further assessment or be unable to afford it.

Assessing Driving Related Skills (ADReS)

- Visual field by confrontation testing.
- Visual acuity using Snellen E chart (MI 20/70)
- Rapid pace walk (< 1 m/ sec).
- Test range of motion.
- Test motor strength (<4/5)
- Trail- Making Test, part B (>3 min)
- Clock- drawing test (score > 8)

- Multiple assessment tools are used for screening and assessment of driving. However, except for **on-road assessment**, there is no single tool at present that should be used to determine fitness to drive.
- In its present form, the ADReS has limited utility as an office screen for individuals who should undergo formal driving assessment

(Ott, Brian R, JAGS, 07-2013)

Effect of tailored on-road driving lessons on driving safety in older adults: A randomized controlled trial.

Conclusion:

Tailored driving lessons reduced the critical driving errors made by older adults. Longer term follow-up and larger trials are required.

Anstey KJ, Eramudugolla R, Kiely KM, Price J. *Accid Anal Prev.* 2018 Jun;115:1-10. doi: 10.1016/j.aap.2018.02.016. Epub 2018 Mar 5

On Road test:

- Licensing agency road test
- Comprehensive driving evaluation by OT

Determine how a visual, physical, or mental condition may be affecting ability to drive safely. They will also help develop and implement a plan for how older adult may drive safely despite his limitations. In some cases, simple changes in driving habits might make driving safer or simple vehicle adaptive devices can help you continue to drive safely.

- Association for Driver Rehabilitation Specialists, www.aded.net or 866-672-9466
- American Occupational Therapy Association, Inc., www.aota.org/older-driver or 301-652-2682
- Michigan Department of State Rehabilitation Agencies and Resource list, www.michigan.gov/sos

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How to approach patient

- Screen early (Medicare Wellness).
- First steps may focus on increasing self-awareness and a shared understanding of driving risk for self and others.
- Ensure that the older adult understands that the goal is to work together to find solutions for him/ her to continue driving if at all possible.

Warning Signs/Self-Assessment (Published by AMA)

- I get lost while driving.
- My friends or family members say they are worried about my driving.
- Other cars seem to appear from nowhere.
- I have trouble finding and reading signs in time to respond to them.
- Other drivers drive too fast.
- Other drivers often honk at me.
- I feel uncomfortable, nervous, or fearful while driving.
- After driving, I feel tired.
- I feel sleepy when I drive.
- I have had some “near-misses” lately.
- Busy intersections bother me.

- Left-hand turns make me nervous.
- The glare from oncoming headlights bothers me.
- My medication makes me dizzy or drowsy.
- I have trouble turning the steering wheel.
- I have trouble pushing down the foot pedal.
- I have trouble looking over my shoulder when I back up.
- I have been stopped by the police for my driving.
- People no longer will accept rides from me.
- I have difficulty backing up.
- I have had crashes that were my fault in the past year.
- I am too cautious when driving.
- I sometimes forget to use my mirrors or signals.
- I sometimes forget to check for oncoming traffic.
- I have more trouble parking lately.

How to approach patient

- Focusing on counseling and referral to alternative transportation options first may allow older adults to consider assessment at a later point in time.
- Encourage self regulation behaviors (avoid rush hours, highways, night driving).
- Driving Cessation is associated with depression, decreased social involvement, and LTC placement.

Alternative transportations in MI:

- The Michigan Department of Transportation website at www.michigan.gov/mdot
- Visit www.michigan.gov/sos or call 888-767-6424.
- Call 800-677-1116 toll-free or visit their website at www.eldercare.gov.
- Visit www.car-fit.org. free, fun, and don't take much time.
- Driving safety courses.
- Public transportation:
 - Bus , trains, cab
 - Uber/ Lyft
 - Grocery Ride

How to approach patient

- Counsel Patients and Caregivers.
- be sensitive and respectful.
- Recommend Driving Cessation.
- Reduce the Impact of Breaching Patient Confidentiality.
- Document Diligently e.g., “sent letter to patient to reinforce recommendation,” “discussed transportation options and gave copy of ‘Patient Resource Sheet’,” “contacted family members with patient’s permission,” “reported patient to State licensing agency with patient’s knowledge”) should be included.

Ethical and legal issues

- Laws, regulations, and policies vary by State.
- Some States (CA, DE, NJ, NV, OR, PA) have mandatory reporting requirements that may give rise to liability for failure to report.
- The ethical responsibility to maintain patient confidentiality (HIPAA) as well as the ethical responsibility to public safety is not limited to physicians; all health care professionals have the same obligation.
- Patient permission should be obtained before contacting caregivers, and this should be documented in the patient's health record. If the patient maintains decisional capacity and denies permission, their wishes must be respected

Ethical and legal issues

- ▶ Know and Comply with State Reporting Laws.

<http://lpp.seniordrivers.org/lpp/index.cfm?selection=visionreqs>

MI License Renewal

- Issued for up to four years and expires on the driver's birthday.
- Renew every 4 years by mail/ Online , and every 8 years in person.
- Requires passing vision test.
- No road test or computer test is required for renewal.

MI License Renewal

Under Michigan law, the Department of State may require a reexamination if the driver (regardless of age):

- May have a physical or mental condition that impairs his or her ability to drive safely.
- Has been involved in three or more negligent crashes resulting in injury or property damage during the last two years.
- Has been involved in a fatal crash.
- Has 12 or more points on his or her driving record within two years.
- Has been convicted of violating the terms, restrictions or conditions of his or her driver's license.

Michigan Law

- In December of 2012, the state of Michigan passed legislation to permit reporting of unsafe drivers by healthcare providers.
- No Affirmative Obligation.

Michigan Law

Public Act 355 explicitly **states that reports submitted to the secretary of state are confidential**. For purposes of reporting under this statute, regulations promulgated under the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) permit such disclosure if the reporter believes in good faith that the disclosure is necessary to prevent or lessen a serious and imminent threat to the health and safety of a person or the public and the disclosure is to a person or persons reasonably able to prevent or lessen the threat.

Privacy Considerations

- A physician or optometrist should ensure prior to disclosing protected health information to third parties under the Michigan statute that such a disclosure complies with HIPAA as well.
- If they do report, and want to be immune from criminal or civil liability, the report must be based on a medical episode; they must recommend a period of license suspension of at least six months in the case of an operator's license; and document the episode in the patient's record. The Secretary of State will keep the report and recommendation confidential to the extent permitted by law (2012 PA 354 and PA 355).
- It may be wise to seek assistance from health care counsel to ensure compliance.

The Michigan State Seal is centered in the background. It features a shield with a star, a banner at the top with the motto "E PLURIBUS UNUM", and a banner at the bottom with the word "TUEBOR". The shield is flanked by two figures, a Native American and a European, and topped by a crest with a wreath.

REQUEST FOR DRIVER EVALUATION

**Michigan Department of State
Traffic Safety Division**

P.O. Box 30810, Lansing, Michigan 48909-9832

Email: medicalforms@Michigan.gov

Phone: 517-335-7051 Fax: 517-335-2189

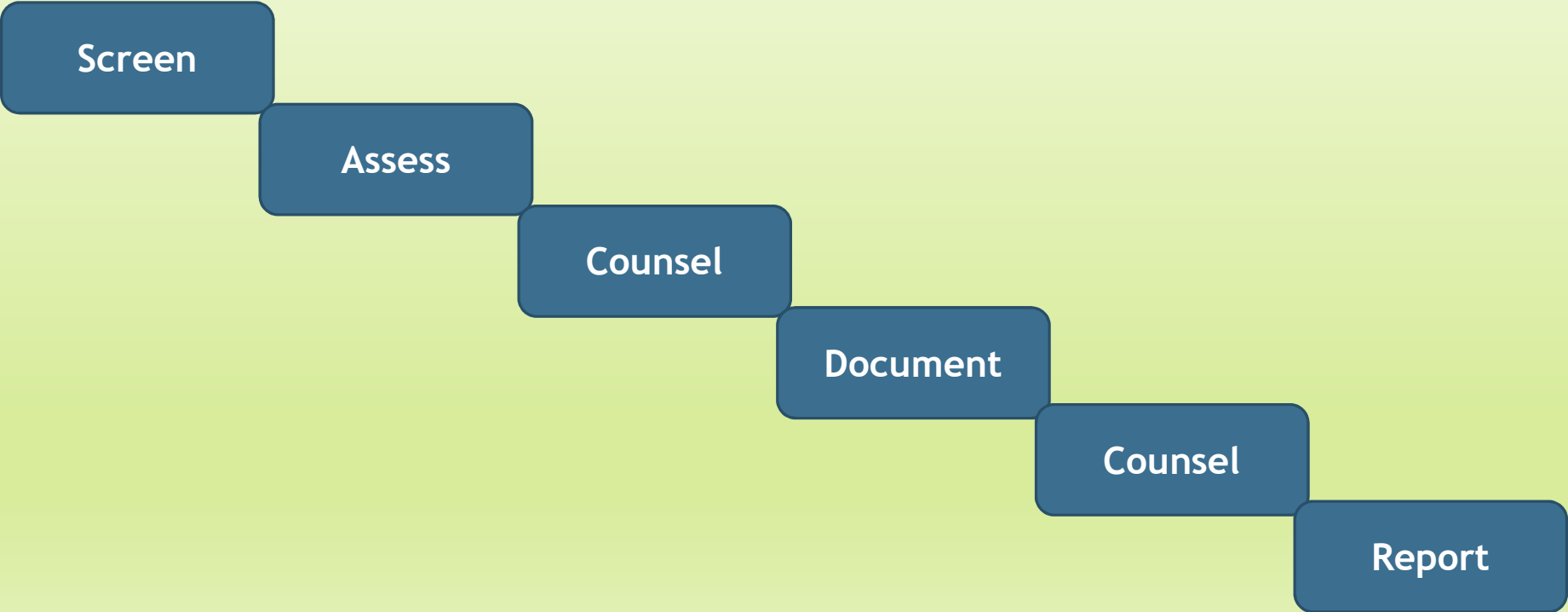
Section SECTION 3 Requestor's Information

This section must be completed and signed or the request will not be processed. The Department does not accept anonymous requests. Requests by private citizens will be kept confidential to the extent permitted by Michigan and Federal law.

Requestor's Name		Agency name, if applicable:	
Street Address:		City:	State:
Telephone Number:		Date:	

I certify that the information provided in this request is true to the best of my knowledge and belief.

Conclusion



Resources:

- The American Geriatrics Society(AGS).
- AMA Physician's Guide to Assessing and Counseling Older Drivers

Questions?

Thank You