

WHEN AND HOW TO TAKE AWAY THE KEYS OHSU, 2021 Emily Morgan, MD

GOALS OF SESSION

- Describe when to screen for driver safety
- Demonstrate how to screen for driver safety
- Describe when to send DMV form vs. refer to OT
- Demonstrate <u>how</u> to report or refer for evaluation

DRIVING DURING THE LIFESPAN

By 2050 drivers >65 yrs old = 25% of the US driving population



DRIVING DURING THE LIFESPAN

Life expectancy exceeds driving fitness expectancy in the US

- ~6 yrs for men
- ~10 yrs for women



Most older adults need to retire from driving in their lifetime

In 2019, motor vehicle crash death rates per capita increased substantially among males and females beginning at ages 75-79

Motor vehicle crash deaths per 100,000 people by age and sex, 2019



http://www.iihs.org/iihs/topics/t/older-drivers/fatalityfacts/older-people/



http://www.iihs.org/iihs/topics/t/older-drivers/fatalityfacts/older-people/



Involvement Rates per 100,000 Licensed Drivers for Older Drivers in Fatal Crashes, by Age Group and Sex, 2018

Sources: FARS 2018 ARF; Licensed Drivers – Federal Highway Administration

https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812928



Older Driver Involvement Rates per 100,000 Licensed Drivers in Fatal Crashes, by State, 2018

Sources: FARS 2018 ARF; Licensed Drivers – Federal Highway Administration Note: 2018 licensed driver data for Puerto Rico is not available.

WHO IS AT RISK?

2019 Data from US Department of Transportation looking at fatal crashes involving a driver 70+

- 59% drivers themselves
- I4% were their passengers
- 27% were occupants of other vehicles, motorcyclists, bicyclists or pedestrians

WHY IS THIS MY JOB?

Studies looking at <u>self-rated driving ability</u> show that older drivers tend to score themselves higher on ability as their skills decline.⁹

However, most older adults agree that if a primary care provider <u>advised them to stop driving</u> they would do so.¹¹

Given this dichotomy between driving perception and ability, it is clearly within the role of providers to assess and counsel older drivers.

DRIVING = INDEPENDENCE











DRIVING IS A COMPLEX TASK

Visual acuity and perception Cognitive abilities: executive function and multitasking

Neuromuscular function





Changes in Vision



Changes in gait, neuro or MSK exam



Changes in memory or cognition



Medications - Polypharmacy



Driving Concerns



TOOLBOX

There is no single validated screening tool to assess driving safety and thus evaluation requires a multifaceted approach





VISION



"Snellen chart" by Jeff Dahl - Own work by uploader, Based on the public domain document: [1]. Licensed under CC BY-SA 3.0 via Commons https://commons.wikimedia.org/wiki/Fi le:Snellen_chart.svg#/media/File:Snelle n_chart.svg



www.psychologyus.com450

Same Scene Viewed By A Person With:



Normal Vision

Cataracts

Same Scene Viewed By A Person With:



Normal Vision

Diabetic Retinopathy



Same Scene Viewed By A Person With:

Normal Vision





Same Scene Viewed By A Person With:

Normal Vision

Age-Related Macular Degeneration

NEUROMUSCULAR FUNCTION

NEUROMUSCULAR FUNCTION

History of falls is associated with motor vehicle accidents in which older drivers were at fault.³⁶

Driving impairment is associated with:

- Inability to reach above the shoulder
- Decreased neck ROM
- Impaired knee flexion
- Inability to walk for more than one block.^{37,38}



NEUROMUSCULAR FUNCTION

Neuro/MSK exams

- Weakness
- Flexibility
- Peripheral neuropathy
- Motor coordination



https://meded.ucsd.edu/clinicalmed/musc_external_rotators.jpg

RAPID PACE WALK TEST

Timed up and go (TUG) was not a reliable indicator of driving ability,³⁹ however the rapid pace walk test is associated with driving ability.¹⁷

- 20 feet (10 feet up and back) using any assistive device they normally use.
- >9 seconds is associated with driving impairment.⁴⁰





MEMORY Mini Cog (13 (8) (9) 10 3 item recall \bigcirc D ٩ ₿ Clock draw 3 Begin \overline{O} 5 Θ \odot 12 ତ ۵ J

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Executive function testing: trails B test

MOCA



- Judgement
- Reaction Time

Planning and sequencing

• Impulsivity







SUBSTANCES

MEDICATIONS



ALCOHOL USE

2014 Data from the National Survey on Drug Use and Health Report 4.1% of drivers over the age of 65 drove under the influence of alcohol in the preceding year roughly the same percentage as drivers aged 16-17 years old.¹⁵

Older adults are at even greater risk due to increased rates of drug interactions, decreased alcohol metabolism, and underlying cognitive impairment.¹⁶

DRIVING CONCERNS

Does the patient limit their driving? Has family expressed concerns?



http://i.dailymail.co.uk/i/pix/2015/05/04/15/284C70B900000578-3067329-image-a-52_1430750640045.jpg

MANDATORY REPORTING TO DMV OR REFERRAL???

PROVIDER RESPONSIBILITY

Providers should know local reporting laws and should feel comfortable counseling their patients on driving cessation and alternative transportation strategies

MANDATORY REPORTER LAWS

Report

- Severe
- Uncontrollable
- Permanent

Refer

Mild

- Potentially controllable
- Potentially reversible

VISION

Refer to ophthalmology specifically for drivers evaluation

NEURO

Strength Sensation Flexibility Motor Coordination

DMV Report

- Severe
- Uncontrollable
- Permanent

OT Referral

- Mild
- Controllable
- Reversible

MEMORY

DMV report

- Mod-Severe Dementia
- Frontal-temporal dementia
- Dementia with Lewy Bodies
- Parkinson's dementia

OT Referral

- MCI
- Mild dementia







MEDICATIONS

DMV report only if medications severely impacting function with plan to continue >6 months

- Opiates
- Hypnotics
- Anticholinergics
- \rightarrow orthostatic hypotension

DRIVING CONCERNS

Voluntary retirement from driving





VOLUNTARY RETIREMENT

	DRIVING PRIVILEGE(S)		
lease check appro	priate box(es), sign and date on	ly the one section tha	t applies to you.
	CUSTOMER INFO	RMATION	
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	SURRENDER OF P	RIVILEGES	
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I am surrenderin Out of State C CDL Endorser	ng my: (Check appropriate b ommercial Driver License (CDL) ment(s):	ox(es).) Class C License Instruction Permi	t rsement



At-Risk Driver Program for Medical Professionals

Overview

Certain medical professionals are required to report drivers with severe functional or cognitive impairments that are uncontrollable by surgery, medication, therapy, a device or special technique.

Note: If you are not a medical professional and would like to submit a report about an at-risk driver, see our <u>Voluntary Reporting</u> page. If you would like to report an aggressive or intoxicated driver, see our <u>Reporting a Problem Driver</u> page. General information about the program can be found at our <u>At-Risk Driver Program</u> page.

You may use the links below to go directly to any section:

- Mandatory Reporters
- Which Patients to Report
- The Mandatory Impairment Referral Form
- How to Report
- After Reporting
- Helping Your Patients Retire from Driving
- <u>Related Information</u>

http://www.oregon.gov/ODOT/DMV/pages/at-risk_program_index.aspx



Checking one or more of the boxes below indicates that is uncontrollable functional and/or cognitive impairments listed or	the above referenced patient has one or more severe and the reverse side unless otherwise described below.
FUNCTIONAL IMPAIRMENTS: (Check all that apply.)	
 VISUAL ACUITY and/or FIELD OF VISION Patient is unable to meet the state vision standards listed below, even with correction: Acuity must be no worse than 20/70 in the best eye Horizontal field of vision of 110 degrees or greater (includes temporal and nasal vision of persons with usable vision in only one eye) 	STRENGTH PERIPHERAL SENSATION FLEXIBILITY MOTOR PLANNING & COORDINATION OTHER (describe):
COGNITIVE IMPAIRMENTS: (Check all that apply.) ATTENTION IMPULSIVITY JUDGMENT & PROBLEM SOLVING VISUOSPATIAL REACTION TIME MEMORY PLANNING & SEQUENCING OTHER:	LOSS OF CONSCIOUSNESS OR CONTROL Single recent episode: Multiple recent episodes: - Date of Last Episode: - Medication to prevent recurrence:

After Reporting

In most cases DMV will suspend the individual's driving privileges. Fewer than 10% of reported drivers ever regain their driving privileges.

DMV notifies the individual that their suspension is effective five days from the date on the notice. They have the right to appeal the suspension by requesting an administrative hearing.

Many drivers surrender their driving privileges and request a quit driving identification card after being suspended under the medically at-risk program. See <u>below</u> to learn how to help your patients retire from driving.

If the individual wishes to regain their driving privileges, DMV's Medical Determination Officer (a physician on staff at DMV) reviews their medical and driving records to determine if they are safe to test. If it is determined that the person may be capable of safely testing, they must first pass the knowledge test and then vision screening before being allowed to take a drive test. If the individual does regain driving privileges, the Medical Determination Officer will decide under what conditions driving privileges may be reinstated based upon the medical information provided. Drivers may be required to medically recertify on a regular basis.

The reporting health care professional will be notified if their patient's driving privileges are reinstated.

Reporting health care professionals may inquire about the status of a report by contacting DMV's Driver Safety Unit at (503) 945-5083.



PRIVATE DRIVING EVALS

Cost ~\$200+ out of pocket

One time appointment ~2 hours

Test thinking, perception, vision and motor function

May or may not be on the road

Report back to PCP with finding

LOCAL REFERRALS

- OHSUOT Marisa Palandri
- Providence Gateway Rehab (503-216-5410)
- Legacy Emmanuel Outpatient Rehab: DriveAbleUSA program (503-413-1500)
- Alpine Rehab. & Wellness Jeff Lango, OTR/L, CDRS (503) 249-3220 <u>alpinerehab@gmail.com</u>

COMMUNITY MOBILITY PROGRAMS

PeaceHealth Southwest Community Mobility Program

(Vancouver, WA) 360-514-2910

<u>Rehabilitation-to-Drive Program</u> focused therapy to strengthen physical and cognitive performance in order to return-to or continue driving.

6-8 visits, may be covered by insurance

<u>Progressive Cognitive Disorders Program</u> for patients that likely need to retire from driving, but are resistant.

- Includes assessment, education on alternate transportation, home safety and other resources
- Usually 2-3 visits
- Initial evaluation and discharge summary sent to referring provider

OTHER RESOURCES

- Aging and Disability Services offices <u>http://www.oregon.gov/dhs/spwpd/pages/offices.aspx#top</u>
- AAA Senior Driving Resources <u>https://exchange.aaa.com/safety/seniordriver-safety-mobility/</u>
- AARP Driving Safety Resources <u>https://www.aarp.org/auto/driversafety/driving-assessment/</u>
- Association of Driver Rehabilitation Specialists <u>https://www.aded.net/</u>
- The Hartford Center <u>https://www.thehartford.com/resources/mature-market-</u> <u>excellence/driving-safety</u>
- Older Adult Driver Initiative
 <u>www.planfortheroadahead.com</u>
- American Geriatrics Society <u>https://www.healthinaging.org/driving-safety</u>



	Reason for Visit Driver Evaluation
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	CONSULT TO PHYSICAL THERAPY [REHAB00001]
	CONSULT TO NEUROLOGY [CNSLT0042]
∠ Links for Providers	CONSULT TO NEUROPSYCHOLOGIST [CNSLT0180]
Trails B High Risk Medications in the elderly	REHAB SPEECH LANGUAGE/COGNITIVE REFERRAL [REHAB00003]
Driving Evaluation Algorithm	🗢 Diagnosis
Overview of Services for Driving Safety	
Resources for Providers - Oregon DMV	Driving safety issue [V15.89]

Oregon DMV:

Referral for driving evaluation: link to PDF below. Report results in one of the following: 1) automatic suspension of license in 5 days, 2) person has 30 days to report medical information that supports continued driving (could still result in suspension if medical information shows severe and uncontrollable impairments), 3} the person has 60 days to take driving knowledge, vision and road tests. There is an appeals process. Driving knowlege test \$5 and road test \$9. Reinstatement of license if it is suspended, then reinstated is \$75.

Mandatory Impairement Referral for severe and uncontrollable impairements: link to pdf below. Results in automatic suspension of license in 5 days. There is an appeals process. Severe and uncontrollable impairement definition: link to PDF below.

Referral for driving evaluation Mandatory Impairement Referral for severe and uncontrollable impairements Severe and uncontrollable impairement definition

\bigtriangledown Resources for Providers - Washington DOT

Washington DOT: Referral for driving evaluation: link to PDF below. After report is reviewed, potential action includes: 1) a medical or vision certificate sent to driver for completion by licensed professional, 2) May require re-examination, which may include mandating adaptive equipment, 3) May revoke license. Driving knowledge and driving test \$20, reinstatement after non-alcohol related revocation \$75. No mandatory reporting of Washington drivers.

Referral for driving evaluation

SPECIAL THANKS

- Colleen M. Casey, PhD, ANP-BC, CNS
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