

2018 TZD Annual Statewide Conference, Mankato, MN



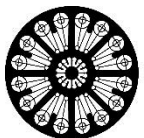
Older Driver at Risk: What do I do?

Panelists:

Catherine Sullivan (St. Catherine University). Alan Ainsworth (AARP),
Jennifer Fischer (Courage Kenny), Alexandra Reese (MN Dept of Public Safety,
Division of Vehicle Services),

Moderator:

Annette Larson (TZD Coordinator for South Central MN)



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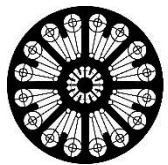
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Older drivers statistics
Driving and Cognition
Neurocognitive disorders/dementia and driving

Catherine Sullivan, Ph.D., OTR

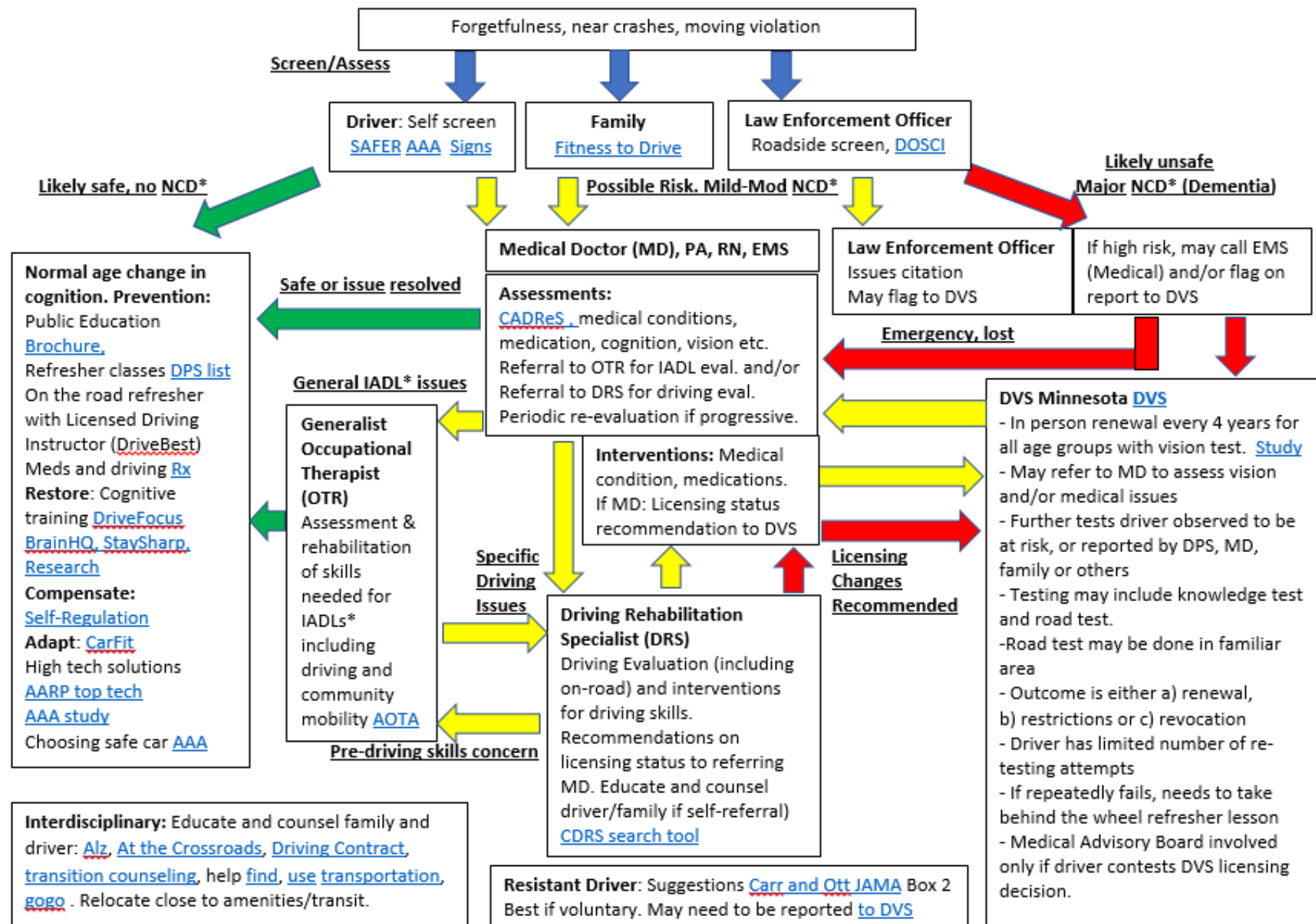
St. Catherine University Henrietta Schmoll School of Health



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Overview

- Focus of session is on suggesting tools for decision-making and interventions when presented with an older driver at risk
- The emphasis will be on older drivers with neurocognitive disorders.
- Information builds on the session presented at the 2016 TZD in Duluth. The handouts with some details on assessments used can still be found at that conference's website.
- We will first have a brief introduction from each panelist on the challenges and some of the solutions that are currently being implemented
- Through audience participation, we hope to identify and discuss additional challenges and solutions.
- Throughout the session, we will be referring to the decision-tree (handout)



*NCD = Neurocognitive disorder. *IADL: Complex activities of daily living including driving. Click on links for full resource. Tools are suggestions, not complete list.

Case Vignette: In 2012, in L.A. 100 y.o. Carter Page backed up into pedestrians, injuring 11

Carter said "My brakes failed. It was out of control,"

Carter's relatives said:

"'He's complete of all his facilities. He get around, he lives by himself. So ain't nobody tell him he's too old to drive,'

Questioned about Carter's age the relative said, "accidents can happen to a person at 20 years old."

Carter also said that he was not too old to drive.

"At this point, it doesn't appear as though there are going to be any charges filed, but it's an ongoing investigation," Said Los Angeles Police Department spokeswoman. "We'll definitely be looking at his competency to retain his driver's license.

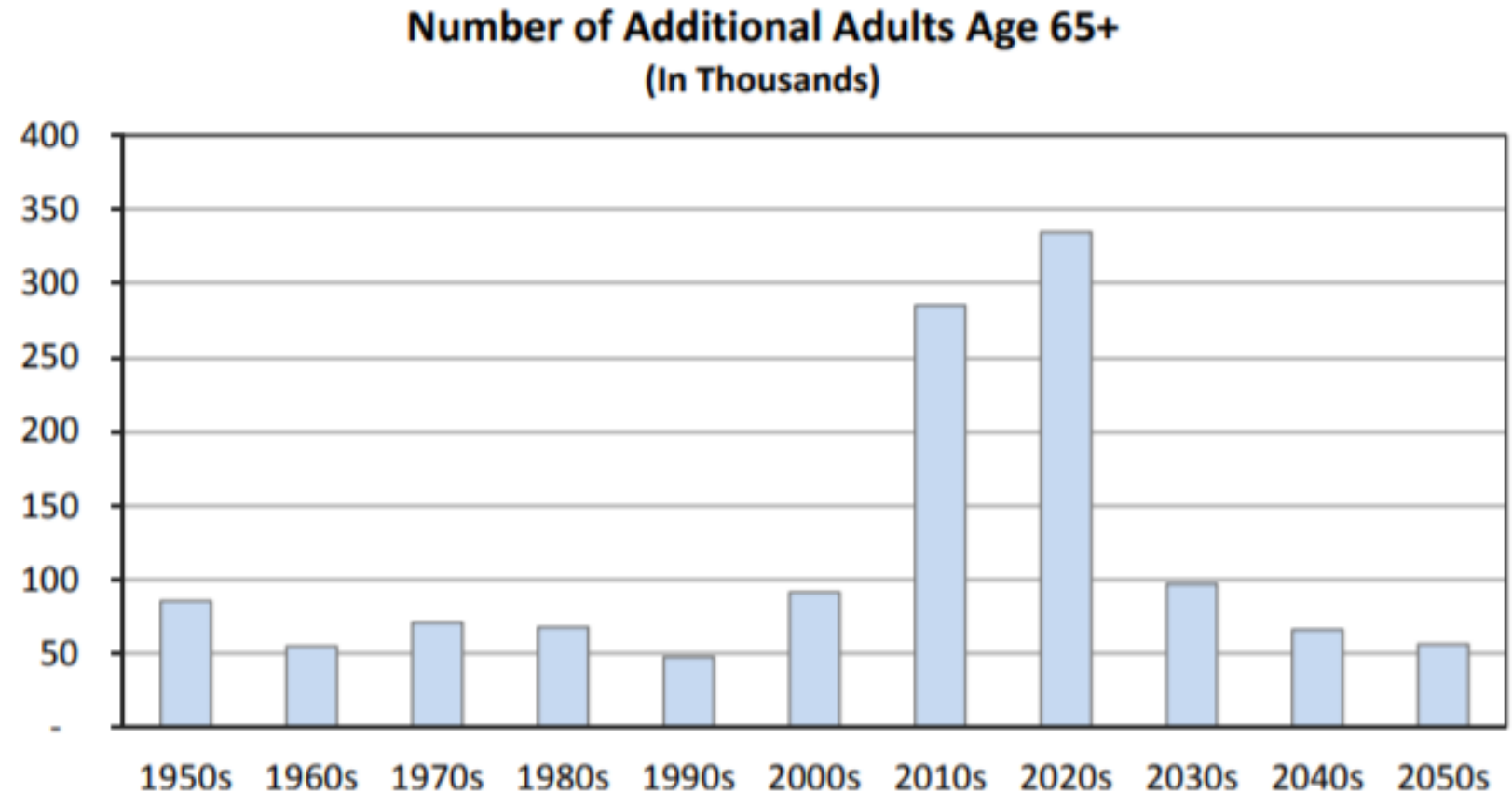


A Cadillac driven by Preston Carter, 100, injured 11 people outside a South Los Angeles school on Wednesday.



Older Driver Demographics in MN

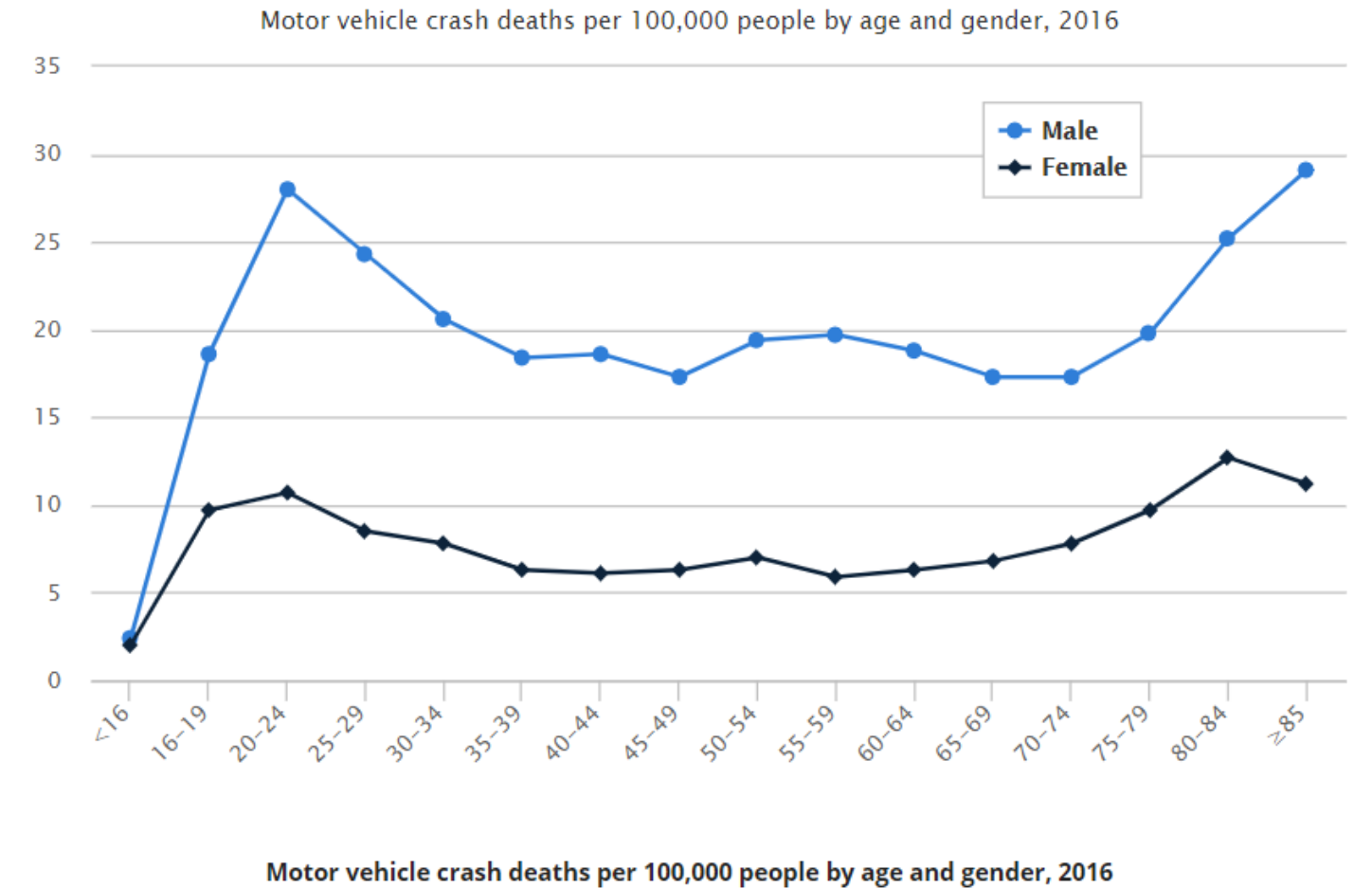
- The number of older adults age 65 and older are expected to double between 2010 and 2035
- In 2035, older adults will make up 22 percent of the state's population (compared to an estimated 13.6 percent in 2012).
- <https://www.house.leg.state.mn.us/hrd/pubs/olderdrv.pdf>





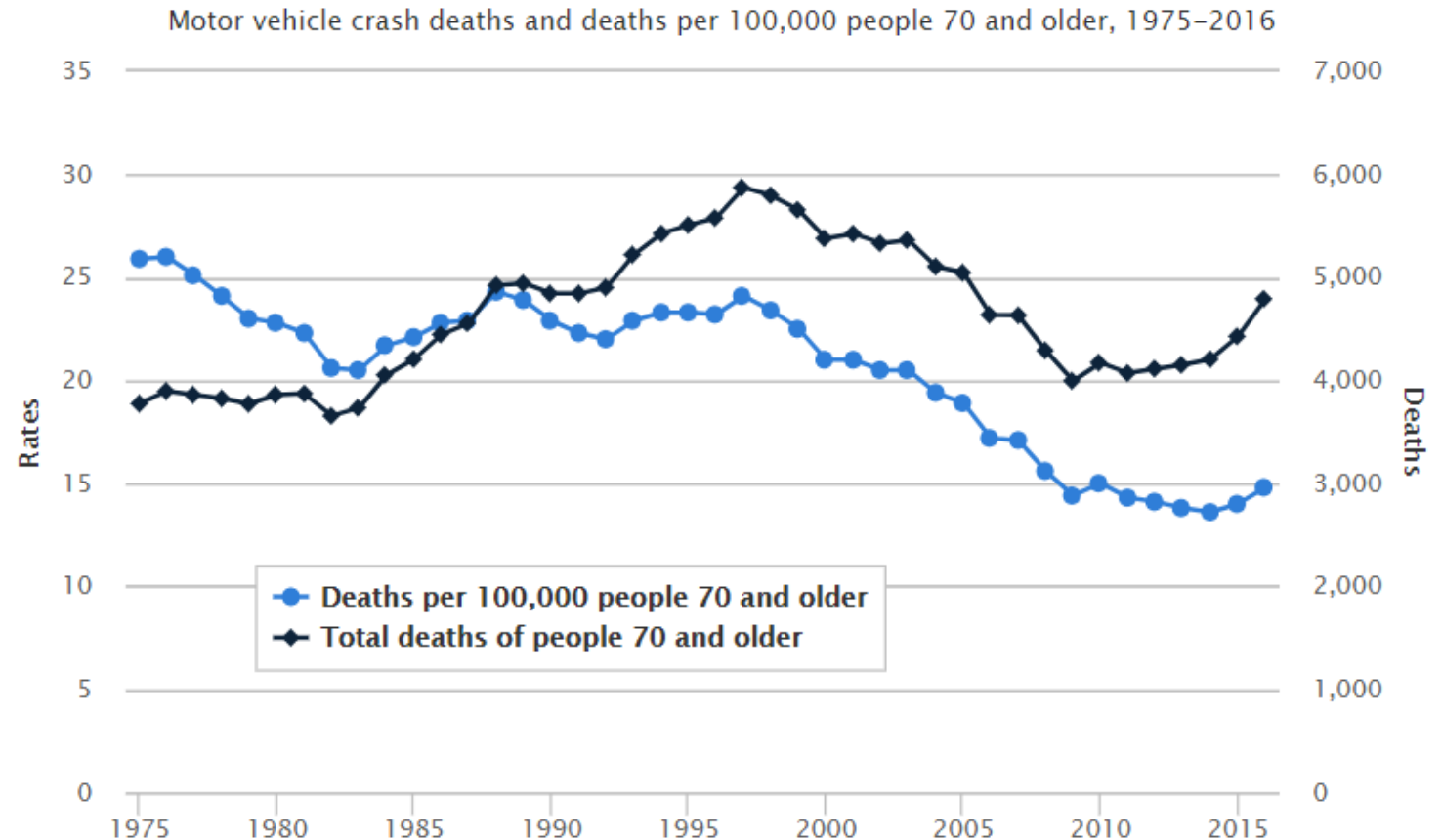
National Older Driver Crash rates

- Graph shows that older drivers 80-85 have similar increase in crash rates per miles driven than young drivers 20-24 do.
- Their risk of crash involvement increases somewhat beyond approximately age 75 years.
- Insurance Institute of Highway Safety iihs.org



Motor Vehicle Fatalities in Older adults

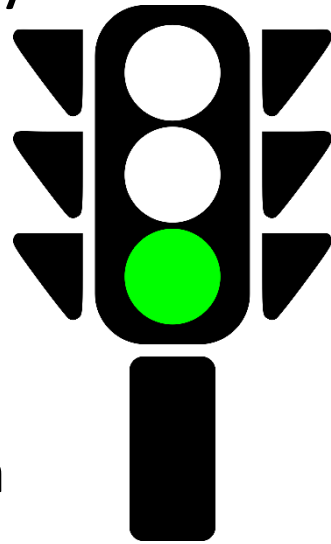
- Crash deaths per 100,000 people 70 and older decreased between 1995 and 2010
- However the trend went up again between 2010 and 2015 where it was similar to 1975
- lihs 2017



Motor vehicle crash deaths per 100,000 people 70 years and older, 1975-2016

Drivers' Normal Age-Related Cognitive Changes

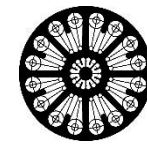
- Normal aging results in changes in cognitive functions such as reduced divided attention and slowed processing speed which can affect safety
- Perspective of driver:
 - Many of them do notice those changes and self-regulate their driving ([AAA, 2015](#))
 - However, most drivers over-estimate their driving ability. ([Wood et al. 2013](#)) found that only 17% rated themselves as potentially unsafe to drive.
 - [Cooper, P. J. \(1990\)](#) found that 31.5% of drivers over 70 reported being “much better” drivers than their peers
 - Drivers with greatest mismatch between self-rated driving ability and actual driving have the highest rate of reported crashes ([Wood et al., 2013](#))
 - In addition drivers may not be aware that age-related cognitive changes can be improved and that cognitive training can improve driving (i.e. [Hay et al. 2016](#))



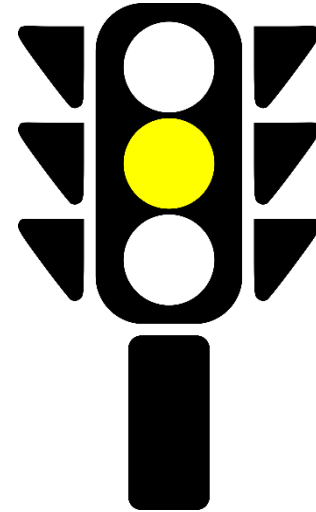
Medical Conditions Affecting Cognition

- Many medical conditions potentially affect cognitive function. They include:
 - stroke,
 - Parkinson's disease,
 - multiple sclerosis,
 - brain injury,
 - substance abuse
 - psychosis
 - other mental health conditions
- [Clinicians guide NHTSA](#)
- The focus in this session is on neurocognitive disorders (NCD), formerly known as dementia
- Mild Neurocognitive disorders may or may not be progressive
- Major NCD (dementia) is always progressive.
- Thus there is a need to do periodic re-assessments in communication with drivers, family members, health professionals and safety professionals.

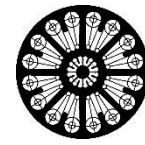
Mild Neurocognitive Disorder (mild NCD)



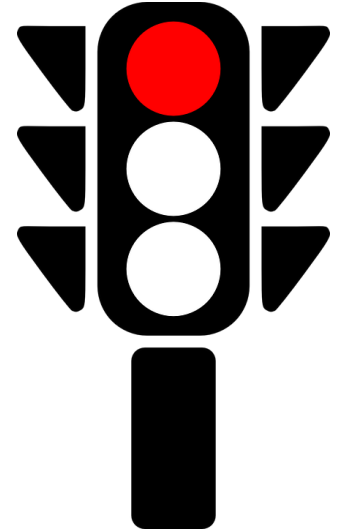
- Formerly known as Mild Cognitive Impairment (MCI)
- [Carr and Ott \(2010 JAMA\)](#) looked at consensus recommendations and found that only few recommended cessation at the mild NCD stage
- Those who did recommend cessation indicated that this was only in the case of deficits in judgment, spatial function or history of at fault MVC.
- Study by [Anstey et al \(2017\)](#) found that there was a wide range in driving safety among patients with MCI.
- [Vaughn et al, 2015](#) found that 60% of patients with MCI in her sample still drove compared to 40% with dementia. ,
- In their study, driving status was most closely linked to performance in instrumental activities of daily living (IADL), as reported by proxy, than performance-based cognitive tests tests [\(Vaughn et al, 2015\)](#). Those results suggest that family involvement in assessment is essential

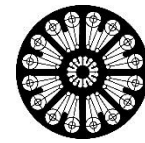


Major Neurocognitive Disorder (mNCD)



- Formerly known as dementia, could include many different illnesses such as vascular, Lewy-Body, Fronto-temporal and mixed mNCD
- [Carr and Ott \(2010 JAMA\)](#) found that most experts agreed that people with moderate to severe dementia should stop driving.
- Stage where professional judgment and context will matter most
- Impact of NCD on driving depends on whether driver has other medical conditions and side effects of medications.
- In a recent article, [Lee \(2017\)](#) indicated that a physician must consider multiple factors when recommending driving cessation for people with dementia.
- [Lee \(2017\)](#) proposes that inability to perform two or more IADL due to cognition in addition to performance on the Trail Making A and B and other sets of evidence should be used together when recommending driving cessation.





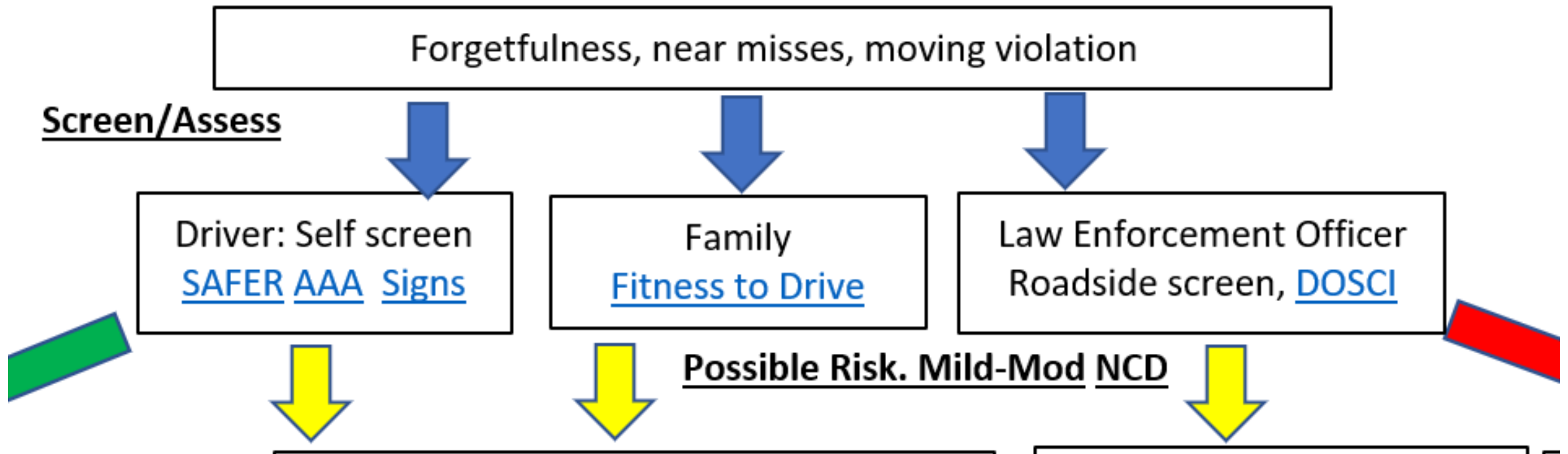
Most Common Driving Errors with Dementia

- [Barco](#) et al. (2015) found that individual with dementia who failed the driving test had the following problem:
 - More problems driving straight and making left and right turns than during lane changes
 - Most dangerous actions were when driving straight (lane positioning and usage) and making left turns
 - Other causes for failure included problems stopping vehicle appropriately, paying attention, decision-making and following the rules of the road
- Road test is seen as the gold standard to assess driving safety
- Since there is limited testing capacity for on-road testing, enlisting the help of caregivers as observers and proxy reports has been found to be a reliable way to help assess safety [Fitness to Drive Screening](#)
- Although no single cognitive assessment can predict driving safety, some tests are more predictive than others [Martin et al. Cochrane review 2013](#)



Decision-Tree: Initial Screens

Top column of Decision Tree Handout:



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Alan Ainsworth

Deputy State Coordinator

AARP Driver Safety, Minnesota



Interventions for normal age-related changes in cognition potentially affecting driving

This is the left hand column of the decision tree handout

Normal age change in cognition. Prevention:

Public Education

[Brochure](#),

Refresher classes [DPS list](#)

On the road refresher with Licensed Driving Instructor ([DriveBest](#))

Meds and driving [Rx](#)

Restore: Cognitive training [DriveFocus](#)

[BrainHQ](#), [StaySharp](#),

[Research](#)

Compensate:

[Self-Regulation](#)

Adapt: [CarFit](#)

High tech solutions

[AARP top tech](#)

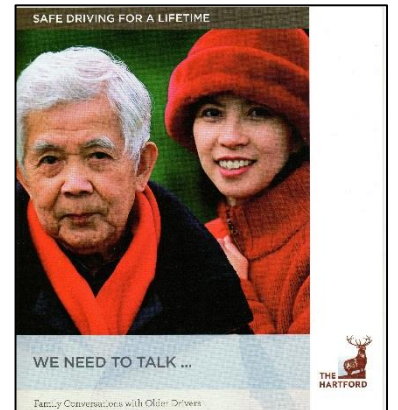
[AAA study](#)

Choosing safe car [AAA](#)

Senior Driver Education



Driver Safety Classes



Driver Safety Classes -- 55 plus

- Main incentive 10% discount on vehicle insurance
- 34 organizations sanctioned in Minnesota
- In Class and On-line – refresh every 3 years
- Key Subjects
 - Changes in bodies, laws, road design, vehicle technology
 - Discussion on when to stop driving
- 101,294 taught in 2017 - 18% on-line
- **BUT trend is down**
 - 2015 had 108,276 and 2016 had 103,276



CarFit events



- National program co-sponsored by AAA, AARP, AOTA
- Events held around the State
- Free 20 minute session/vehicle
- 12 – point checklist
 - Driving position
 - Safety features
 - Mirror settings
 - Help from OT's
 - Assistive devices
 - Physical assessment



SMART DRIVERTEKSM

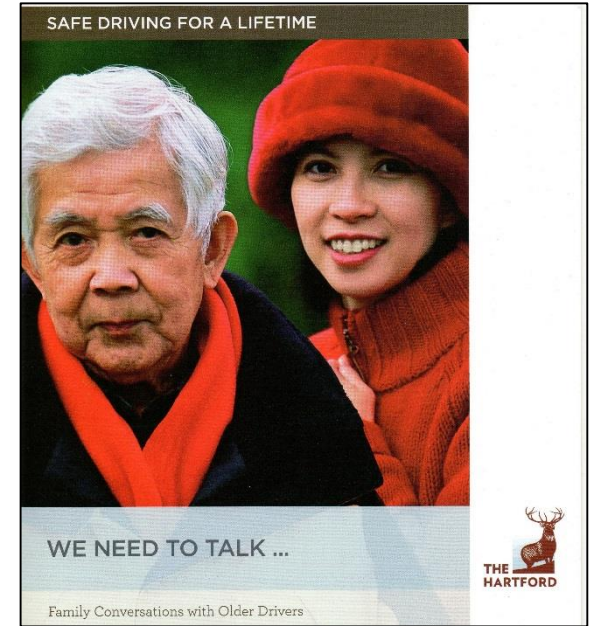


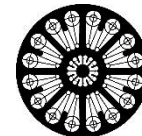
- Free, 90 minute workshops around the State, also now On-line
- Interactive sessions covering key technologies
 - Blind spot indicators
 - Lane change warning
 - Reverse Monitoring
 - And five other safety related options
- Participants leave with their own check list
- High level of participation



We Need to Talk

- Free, 90-minute workshop
- In class or On-line
- Key Subjects
 - How to start the discussion
 - How to assess driving capability
 - Resources available to legally stop drivers
 - Alternative transportation options
 - Cognitive improvement programs





Sullivan

New Interventions for Normal Age Changes in Cognition

See left column
of decision tree

Normal age change in cognition. Prevention:

Public Education

[Brochure,](#)

Refresher classes [DPS list](#)

On the road refresher
with Licensed Driving
Instructor ([DriveBest](#))

Meds and driving [Rx](#)

Restore: Cognitive
training [DriveFocus](#)

[BrainHQ,](#) [StaySharp,](#)
[Research](#)

Compensate:

[Self-Regulation](#)

Adapt: [CarFit](#)

High tech solutions

[AARP top tech](#)

[AAA study](#)

Choosing safe car [AAA](#)

Sullivan

Bottom left section of decision tree handout:

Interdisciplinary: Educate and counsel family and driver: Alz, At the Crossroads, Driving Contract, transition counseling, help find, use transportation, gogo . Relocate close to amenities/transit.

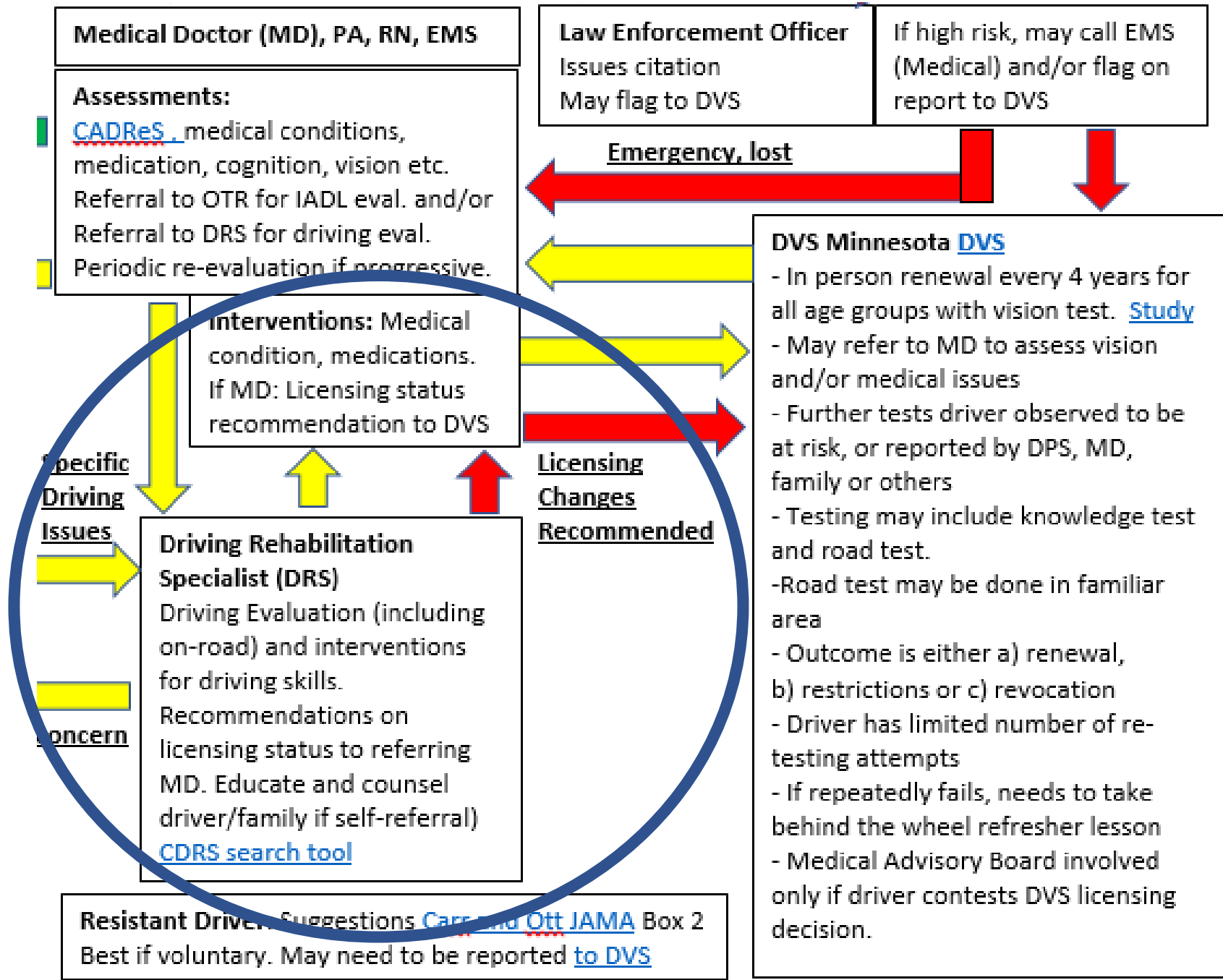
At the Crossroads is similar to “We need to Talk” but specific to older drivers with dementia

Comprehensive Driver Assessments

Jennifer Fischer,
OTR/L, CDRS, LDI

Courage Kenny Rehabilitation Institute

Jennifer.fischer2@allina.com



A MODERN DRIVING TEST



NOW I WANT YOU TO STEER WITH
YOUR KNEE AS YOU TALK ON THE PHONE,
EAT SOME FAST FOOD AND PUT ON
MAKEUP IN THE REAR VIEW MIRROR

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Caveat: All Driver Assessments Not Equal

- Different types of assessments look at different things; there is overlap but not the same information.
 - Testing provided by DVS (vision, knowledge, road tests)
 - Pre-driving screen or community access screen by an OT
 - Cognitive screens by medical professional
 - Eye exams assess if meet vision requirements

“Foot slipped off the brake pedal”



Who should complete?

- If there is a concern about driving safety. No formal referral needed for Courage Kenny program. Common reasons:
 - New diagnosis of NCD
 - Chronic medical condition with possible cognitive impact (rule out need for equipment – cognitive error vs. physical/sensory issue)
 - Significant health event (brain injury, acute confusion, stroke, acute mental health issue)
 - Family, MD concerns

What is a Driver Assessment?



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- Assess skills of driving and impact of any deficits or disability on current driving abilities and safety.
- Components:
 - Clinical assessment
 - On-road assessment of driving abilities (using CKRI vehicle)
 - Review results and recommendations
 - 3 hour appointment, family/friend encouraged to be present at least for results

Comprehensive Driver Assessment: Clinical

- Medical history
- Driving history
- Medications
- Physical status
- Vision
- Reaction time

Cognitive:

- Divided attention
- Judgment
- Processing speed
- Executive skills
- Memory

Comprehensive Driver Assessment: On the Road

- Control of vehicle
- Turning
- Lane positioning
- Planning/ processing
- Identify potential risk situations
- Multi-tasking
- Judgment
- Speed control
- Read/interpret traffic signs
- Visual scanning and attention
- Management of distractions
- Quick decision making

Equipment Options

- Assess need for adaptive equipment if there are physiological changes due to:
 - Diabetes-related peripheral neuropathy
 - Multiple Sclerosis, Parkinson's Disease
 - Arthritis
 - Various physical limitations
- Significant learning curve and process for installing adaptive equipment in personal vehicle.

Examples of Adaptive Equipment



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Potential Outcomes

- Continue/resume driving
 - Restrictions?
- Lessons as extended assessment
- Pursue driving with equipment
 - Lessons indicated
 - Must pass MN State road test with equipment
- Driving not recommended
 - Need for further therapy or re-assessment?
 - Alternative transportation, service resource options provided

Communication of Results

- Report given to client, sent to MD with signed authorization of client

Final decision on license status is made by physician based on report outcome, medications, medical history.

- If outcome is restrictions added to license or cancellation of license the physician **must** report this to MN Dept of Public Safety, Division of Driver and Vehicle Services for change to be made to DL.



Physician Reporting

- No mandatory reporting law in MN, WI, IA, ND or SD
- Physician reporting is *encouraged*, they are immune from liability
- MN DVS will also accept information from courts, other DMVs, police, family members and other resources. To report an at-risk driver:
<https://dps.mn.gov/divisions/dvs/Pages/dvs-content-detail.aspx?pageID=670>

Department of Vehicle Services



Alexandra Reese
(MN Dept of Public Safety, Division of Vehicle Services)

On the right is the right column of the Decision Tree

DVS Minnesota [DVS](#)

- In person renewal every 4 years for all age groups with vision test. [Study](#)
- May refer to MD to assess vision and/or medical issues
- Further tests driver observed to be at risk, or reported by DPS, MD, family or others
- Testing may include knowledge test and road test.
- Road test may be done in familiar area
- Outcome is either a) renewal, b) restrictions or c) revocation
- Driver has limited number of re-testing attempts
- If repeatedly fails, needs to take behind the wheel refresher lesson
- Medical Advisory Board involved only if driver contests DVS licensing decision.

Discussion



- **Moderator: Annette Larson (TZD Coordinator for South Central MN)**

Thank you!



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