

SHOULD I REPORT THIS PATIENT WITH COGNITIVE IMPAIRMENT/DEMENTIA TO THE MTO?

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Disclosures

- I have no conflicts of interest to declare

Objectives

- Identify resources that will assist in evaluating whether a patient with cognitive impairment/dementia should be reported to the MTO
- Explain how to fill out MTO form for a patient with questionable driving ability due to cognitive impairment/dementia
- Evaluate cases and provide practical examples of evaluating whether to report a patient with cognitive impairment
- Review common clinician concerns regarding driving



**You got a problem with
my driving, punk?**

Why must clinicians assess fitness for driving?

- Motor vehicle accidents (MVA) result in significant injury, disability and death
- Older adults are 4x more likely to be injured or hospitalized as a result of MVA
- Older adults with mild dementia have eight times the crash risk and 50 per cent risk of serious crash risk in the next two years.
- 3.25 million age 65+ have a valid drivers license in Canada (2009 data).

200,000 of those are age 80+²

- Those 80+ are the fastest growing segment of the population²
- In Ontario, there are 2,374,210 people over age 65 ¹
- Driving is an important life skill that affects patient autonomy and independence

- People age 75+ have the highest pedestrian death rate per 100,000
- At age 80+ the pedestrian death rate is 3x higher than it is at age 79 and younger
- About half of fatal crashes involving drivers 80+ occur at intersections and involve more than one vehicle, compared to 23% of drivers 50 and under

Factors contributing to MVA's

- Reaction time
- Sensory impairment (Vision, hearing)
- Motor strength
- Co-morbidities/physical illness
- Cognitive impairment
- Medications
- Cardiovascular disease
- Neurologic disease (e.g. seizure)
- Depressive symptoms

Driving and Dementia

- Most drivers with dementia do not have accidents
- Most will modify their driving and many will voluntarily retire from driving
- Specific domains of cognitive impairment are more high risk than others (impulsivity, hallucinations/delusions, visuospatial challenges)
- Patients with frontotemporal dementia (specifically behavioural variant), dementia with Lewy Body, Parkinson's disease dementia are at greatest risk
- Mild cognitive impairment and very early/early major neurocognitive disorder (dementia) are not contraindications to driving

So you've made a diagnosis of
dementia



“In general, physicians should err on the side of reporting any potentially unfit driver. This is especially important in jurisdictions where there is mandatory reporting obligation”

CMA Driver's Guide

- Mild dementia: driving fitness should be reassessed Q6-9 months, or more frequently if cognitive impairment progresses
- It is recommended that clinicians administer more than one cognitive screening tool
- If in-office cognitive testing is markedly abnormal, do these tests results seem consistent with other evidence?
 - *Use common sense to evaluate the findings*
 - *Cognitive screening tools alone cannot determine driving fitness*
 - *Abnormalities on cognitive screening tests should trigger more in-depth testing of driving ability*

Dementia and Driving

- Moderate to severe dementia are contraindications to driving (unless high risk subtype)
- MODERATE STAGE DEMENTIA
 - loss of 2 IADL's or 1 ADL ON THE BASIS OF COGNITION

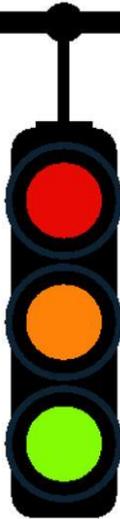
IADL's

- Shopping
- Housework/hobbies
- Accounting
- Food preparation
- Telephone/transportation
- Medication

ADL's

- Dressing
- Eating
- Ambulation
- Toileting
- Hygiene

Figure 1. Checklist of considerations in driving safety



- History of driving accidents or near accidents*
- Family member concerns*
- Trail Making A and B tests—for processing speed, “task switching,” and visuospatial and executive function
- Clock-drawing test—for visuospatial and executive function
- Copying intersecting pentagons or cube—for visuospatial function
- Cognitive test scores—possibly helpful
- Dementia severity according to the Canadian Medical Association guidelines²⁶—inability to independently perform 2 instrumental activities of daily living or 1 basic activity of daily living

*Ask the patient and a family member separately.

Involve the family

Ask:

- Are you comfortable being a passenger when this person is driving?
- Would you allow a child e.g. a grandchild to ride with this person?
- Have they had any near misses or accidents in the last year? Any traffic violations?
- Are they self-restricting their driving?
 - *only driving in town, not on highways*
 - *only driving to the post-office*
 - *not driving at night*
 - *only on familiar routes*
- Less able to problem solve if they get lost
- Do you need to “co-pilot” to give directions or cues?

Cognitive Testing

May include:

- MMSE
- MoCA-more sensitive assessment of executive function than MMSE
- Trails A/B
- Intersecting pentagons
- Clock draw

Cognitive Testing

- Studies support the use of composite batteries of testing rather than one single test to accurately predict driving safety and performance
- The greater the number or severity of abnormalities, the more confident you can be that the patient is unsafe to drive
- Needs to include the clinical context

1. Bennett JM, BatChekaluk E, Batchelor J. Cognitive tests and determining fitness to drive in dementia: a systematic review. *J Am Geriatr Soc* 2016;**64**(9):1904-17. Epub 2016 Jun 2
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3. Joseph PG, O'Donnell MJ, Teo KK, Gao P, Anderson C, robstfield JL, et al. The Mini-Mental State Examination, clinical factors, and motor vehicle crash risk. *J Am Geriatr Soc* 2014;**62**(8):1419-26. Epub 2014 Jul 15.
4. Hollis AM, Duncanson H, Kapust LR, Xi PM, O'Connor MG. Validity of the Mini-Mental State Examination and the Montreal Cognitive Assessment in the prediction of driving test outcome. *J Am Geriatr Soc* 2015;**63**(5):988-92. Epub 2015 May 4.
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Cognitive Testing

- Several studies support the use of the Trails B. These test executive functioning, cognitive flexibility, processing speed and ability to switch attention between tasks
 - *“3 or 3 rule”-cutoff for 3 minutes or 3 errors*
- Trails A less sensitive. Cutoff should be less than 48sec
- MMSE score not found to be predictive of driving risk
- Intersecting pentagons on MMSE is associated with driving cessation
- Clock draw
- MoCA is more predictive of driving risk (better assessor of executive function)
 - *Score <18 is associated with greater likelihood of failing on-road test*

1. Hollis AM, Duncanson H, Kapust LR, Xi PM, O'Connor MG. Validity of the Mini-Mental State Examination and the Montreal Cognitive Assessment in the prediction of driving test outcome. J Am Geriatr Soc 2015;**63**(5):988-92. Epub 2015 May 4.
2. Roy M, Molnar F. Systematic review of the evidence for Trails B cut-off scores in assessing fitness-to-drive. Can Geriatr J 2013;**16**(3):120-42

Trails Making Test

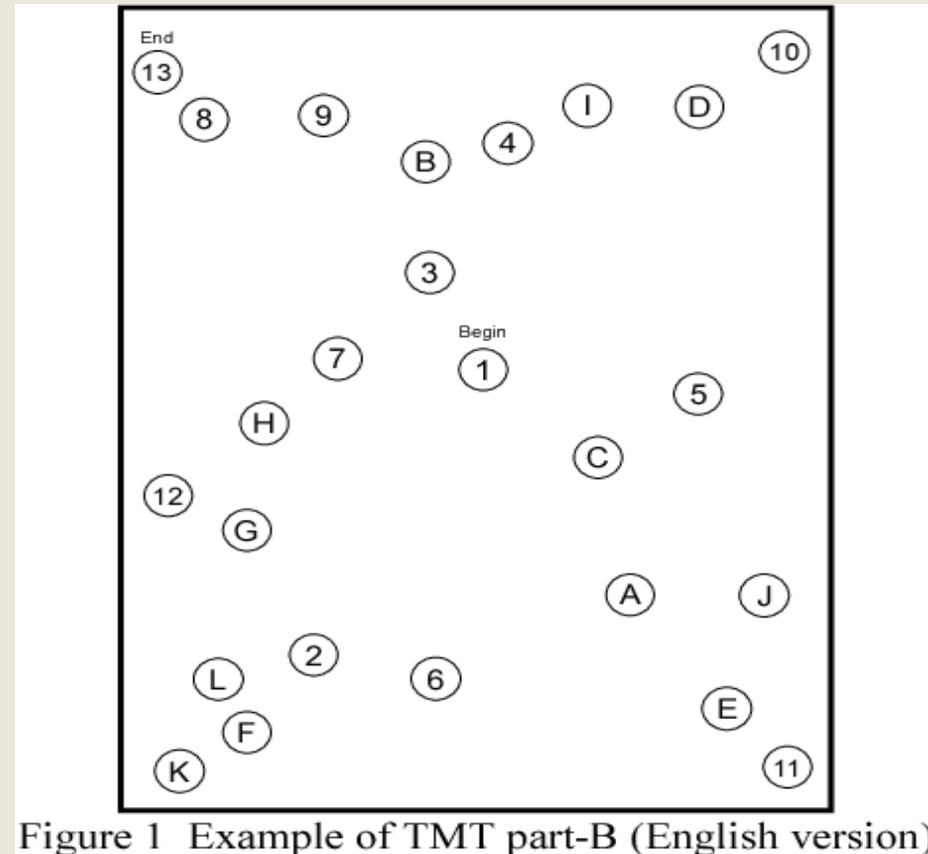


Figure 1 Example of TMT part-B (English version)

MoCA

MONTREAL COGNITIVE ASSESSMENT (MOCA)
Version 7.1 Original Version

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

VISUOSPATIAL / EXECUTIVE		Copy cube	Draw CLOCK (Ten past eleven) (3 points)	POINTS																		
		[]	[]	___/5																		
[]	[]	[] Contour	[] Numbers [] Hands																			
NAMING																						
			[]	___/3																		
[]	[]	[]																				
MEMORY		Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.	<table border="1"> <thead> <tr> <th></th> <th>FACE</th> <th>VELVET</th> <th>CHURCH</th> <th>DAISY</th> <th>RED</th> </tr> </thead> <tbody> <tr> <td>1st trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2nd trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		FACE	VELVET	CHURCH	DAISY	RED	1st trial						2nd trial						No points
	FACE	VELVET	CHURCH	DAISY	RED																	
1st trial																						
2nd trial																						
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		[] FBACMNAAJKLBAFAKDEAAAJAMOF AAB		___/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	<table border="1"> <thead> <tr> <th>FACE</th> <th>VELVET</th> <th>CHURCH</th> <th>DAISY</th> <th>RED</th> </tr> </thead> <tbody> <tr> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> </tr> </tbody> </table>	FACE	VELVET	CHURCH	DAISY	RED	[]	[]	[]	[]	[]	Points for UNCUEd recall only								
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[]	[]	[]	[]	[]																		
Optional		Category cue																				
		Multiple choice cue																				
ORIENTATION		[] Date [] Month [] Year [] Day [] Place [] City		___/6																		
© Z.Nasreddine MD		www.mocatest.org	Normal ≥ 26 / 30	TOTAL ___/30																		
Administered by: _____		Add 1 point if ≤ 12 yr edu																				

MMSE

MINI MENTAL STATE EXAMINATION (MMSE)

Name:
DOB:
Hospital Number:

One point for each answer	DATE:		
ORIENTATION Year Season Month Date Time Country Town District Hospital Ward/Floor	...../ 5	...../ 5	...../ 5
REGISTRATION Examiner names three objects (e.g. apple, table, penny) and asks the patient to repeat (1 point for each correct. THEN the patient learns the 3 names repeating until correct).	...../ 3	...../ 3	...../ 3
ATTENTION AND CALCULATION Subtract 7 from 100, then repeat from result. Continue five times: 100, 93, 86, 79, 65. (Alternative: spell "WORLD" backwards: DLROW).	...../ 5	...../ 5	...../ 5
RECALL Ask for the names of the three objects learned earlier.	...../ 3	...../ 3	...../ 3
LANGUAGE Name two objects (e.g. pen, watch). Repeat "No ifs, ands, or buts". Give a three-stage command. Score 1 for each stage. (e.g. "Place index finger of right hand on your nose and then on your left ear"). Ask the patient to read and obey a written command on a piece of paper. The written instruction is: "Close your eyes". Ask the patient to write a sentence. Score 1 if it is sensible and has a subject and a verb.	...../ 2/ 1/ 3/ 1/ 1	...../ 2/ 1/ 3/ 1/ 1	...../ 2/ 1/ 3/ 1/ 1
COPYING: Ask the patient to copy a pair of intersecting pentagons	...../ 1	...../ 1	...../ 1
TOTAL:	...../ 30	...../ 30	...../ 30

MMSE scoring
24-30: no cognitive impairment
18-23: mild cognitive impairment
0-17: severe cognitive impairment

On-road driving assessment

- Most accurate way to assess driving fitness
- Extremely expensive
- \$800 here in Sudbury

What is the Program?

Driver Assessment and Rehabilitation Service (DARS) has been a Ministry of Transportation (MTO) approved assessment centre since 1992. In 2013, DARS became an approved Functional Assessment Centre (FAC) and in 2014 awarded one of the WSIB Driver Rehabilitation contracts for Northeastern Ontario.

We offer a variety of comprehensive assessments and services for drivers (passengers) of all ages. Our goal is to meet clients' needs and ensure a safe return to driving whenever possible. All assessments are performed by an experienced licensed Occupational Therapist trained in the field of driver assessment and rehabilitation.

What do we offer?

Driver Evaluation:

A comprehensive evaluation for drivers who have a medical condition which may affect their cognitive or physical ability to safely operate a motor vehicle. The assessment usually includes an in-clinic portion followed by an on-road evaluation.

Driver Training:

Some clients may require further practice and/or training to become safe on the road. We create an individualized treatment program including sessions with a qualified driving instructor.

Vision Waiver Assessment:

An assessment for drivers who do not meet the MTO's G license vision requirements but may be able to safely compensate for their visual deficits. Individuals must first be deemed eligible by the MTO to participate in this program. DARS is the only centre in the Northeast approved by the MTO for this assessment.

Vehicle Modifications:

Our therapists provide an assessment and/or consultation for individuals requiring vehicle modifications in order to enter their vehicle, transport a mobility device (wheelchair or scooter) within the vehicle, or operate a motor vehicle using adaptive equipment.

Driving Anxiety Treatment:

A customized assessment and treatment program for those who are having difficulty returning to driving due to anxiety or fear of driving after an accident.

Driver Assessment Rehabilitation Service (DARS)

Community Care and Rehabilitation
First Floor, North Tower
Ramsey Lake Health Centre



Part of
Forward to Function



Health Sciences North
Horizon Santé Nord

41 Ramsey Lake Road
Sudbury ON
P3E 5J1
www.hnsudbury.ca/fzf



Health Sciences North
Horizon Santé Nord

(disponible en français)

What Can I Expect During My Assessment?

Part 1 – In-Clinic Assessment

The Occupational Therapist will ask you about your relevant medical information and general driving history. Depending on your assessment needs, you may undergo testing designed to evaluate cognitive and perceptual skills required for driving. You will also have a basic vision screen as well as testing of your physical strength and range of motion. If you require adaptive controls to drive safely, the various options available will be discussed with you.

Part 2 – On-Road Assessment

If appropriate, an in-car assessment is done with a Certified Driving Instructor, in a vehicle provided by the instructor. Both the Occupational Therapist and driving instructor observe in-car performance. We will look at your ability to physically manage the vehicle and your skills with respect to safety awareness and decision making in different traffic situations. If you require adaptive controls, you will be able to try them at this time as well.

Part 3 – Feedback Session

Following the clinical and in-car assessments, the Occupational Therapist will use the information gathered to make recommendations regarding your driving ability and if you have any training or equipment needs. Both the assessment results and recommendations will be explained in detail to you. We may find you safe to drive, recommend that you participate in further training or we may recommend driving cessation.

A detailed report will be sent to you, the referring physician, the Ministry of Transportation, and the third party funding, if applicable. Note that the final decision regarding license status is made by the Ministry of Transportation.

Who can Benefit from DARS Services?

People who have:

- ↳ A physical condition that makes normal operation of a vehicle difficult or unsafe (i.e. amputation, stroke, arthritis, upper or lower body weakness)
- ↳ Family who have expressed concerns about driving safety
- ↳ A medical condition that affects mental status or cognitive ability to drive safely (i.e. dementia, Alzheimer's disease, brain injury)
- ↳ Been directed by their physician or the MTO to undergo a driving evaluation
- ↳ A medically suspended license
- ↳ Visual deficits, including blind spots and conditions such as macular degeneration
- ↳ Anxiety and/or fear of driving following an accident

Referral Procedure

Anyone who feels they need an assessment can initiate the referral process, however we do require our referral form to be completed by your physician. This can be faxed to the DARS office and must be received before your assessment can be scheduled. If your license has been suspended we will assist in obtaining a temporary permit for the assessment purposes.

Fee

Driver assessment and rehabilitation is not funded by the Ministry of Health and Long Term Care (OHIP). In some instances third-party payers will cover the cost. Assessment fees are charged to cover costs of both the clinical and in-car assessments.

For Additional Information:

If you require further information, have specific questions, wish to receive a current fee schedule, or referral forms, please call:

**Driver Assessment and
Rehabilitation Service**

**Telephone: (705)523-7098
or 1-866-469-0822**

Fax: (705)523-7051



Health Sciences North
Horizon Santé-Nord

Mail to:

**DRIVER ASSESSMENT AND
REHABILITATION SERVICE**

Ramsey Lake Health Centre
41 Ramsey Lake Road
Sudbury, Ontario
P3E 5J1
Tel.: (705) 523-7098
Fax : (705) 523-7278

Name: _____

Address: _____

Phone (Home): _____

Phone (Work): _____

D.O.B.: _____

DRIVING HISTORY

- License valid
- Suspended by MTO
- Physician's orders not to drive
- Never had license

PLEASE MAKE SURE TO INDICATE

License #: _____

Change in medical condition reported to MTO by physician? Yes No

MEDICAL HISTORY

History of Illness Resulting in this Referral _____

Past Medical History _____

Medications _____

Seizure Disorder No Yes Last Seizure _____

Substance Abuse No Yes

Psychological/Behavioral Status _____

FUNCTIONAL LIMITATIONS

Physical Status _____

Cognitive Status _____

Perceptual Status _____

Mobility _____

Signature of Referring Physician _____

Printed Name _____

Office Phone # _____ Date _____

DRIVER EVALUATION IS NOT FUNDED BY THE MINISTRY OF HEALTH.

May 2015



Medical Condition Report

Fee Code K035

Mandatory report by a prescribed person in compliance with subsection 203 (1) of the Highway Traffic Act, or Discretionary report in relation to subsection 203 (2) of the Highway Traffic Act. For guidance on reporting requirements see Regulation 340/94 or Interpretive Guide – Form 5108E_Guide.

Medical Condition Report Form – 2 Pages

Complete electronically, print, sign and fax both pages.

To: Driver Medical Review Office 416-235-3400 or 1-800-304-7889

From:

Or Mail to: Ministry of Transportation – Driver Medical Review Office
77 Wellesley St W, Box 589
Toronto ON M7A 1N3
Telephone: 416-235-1773 or 1-800-268-1481

Please complete in full. Fields marked with an asterisk (*) are mandatory.

Part 1. Patient Information

Last Name *		First Name *		Middle Initial
Date of Birth (yyyy/mm/dd)*	Gender * <input type="checkbox"/> Male <input type="checkbox"/> Female		Driver's Licence Number (if available)	
Current Address				
Unit Number	Street Number *	Street Name *		PO Box
City/Town/Village *			Province *	Postal Code

Part 2. Practitioner's Information

Practitioner's Last Name *		Practitioner's First Name *		
Licence Number *		Telephone Number ext.		
Practitioner's Address				
Unit Number	Street Number *	Street Name *		Postal Code
City/Town/Village *			Province *	Postal Code

I am this person's:

- Family/Treating Physician
- ER Physician
- Nurse Practitioner
- Occupational Therapist
- Urgent Care/Walk In Clinic Physician
- Other (specify) _____

Patient is aware of this report Yes No

I approve of the ministry releasing this report to the patient or their legal representative if requested Yes No

I wish to be notified if my patient requests a copy of this report from the ministry, as releasing this report may threaten the health or safety of the patient or another individual Yes No

Practitioner's Signature _____ Date of Report Examination (yyyy/mm/dd) *

Patient Information

Last Name	First Name	Middle Initial	Date of Birth (yyyy/mm/dd)
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Part 3. Medical Condition or Impairment (Check all that apply)

Cognitive Impairment

A disorder resulting in cognitive impairment that affects attention, judgement and problem solving, planning and sequencing, memory, insight, reaction time or visuospatial perception, and results in substantial limitation of the person's ability to perform activities of daily living. Due to:

- Dementia
- Brain Injury / Tumour
- Unknown
- Other (specify) _____

Sudden Incapacitation

A disorder that has a moderate or high risk of sudden incapacitation, or that has resulted in sudden incapacitation and that has a moderate or high risk of recurrence. Due to:

Seizure

- Alcohol/Drug Withdrawal
- Epilepsy
- Stroke
- Other (specify) _____

Syncope

- Single episode not yet diagnosed
- Recurrent episodes
- Heart disease with pre-syncope/syncope/arrhythmia

CVA resulting in (check all that apply)

- Physical Impairment
- Cognitive Impairment
- Visual Field Impairment

Other

- Narcolepsy with uncontrolled cataplexy or daytime sleep attacks
- Obstructive sleep apnea – Untreated or Unsuccessfully Treated with Apnea-hypopnea index (AHI) of greater than or equal to 30 or excessive daytime sleepiness
- Hypoglycaemia requiring intervention of third party or producing loss of consciousness
- Uncontrolled diabetes or hypoglycaemia
- Other (specify) _____

Motor or Sensory Impairment

A condition or disorder resulting in severe motor impairment that affects: coordination, muscle strength and control, flexibility, motor planning, touch or positional sense. Due to:

- Neurological Disease (specify) _____
- Spinal Cord Injury
- Loss of Limb
- Other (specify) _____

Visual Impairment

- Best corrected visual acuity below 20/50 with both eyes open and examined together
- Visual field less than 120 continuous degrees along the horizontal meridian, or less than 15 continuous degrees above and below fixation, or less than 60 degrees to either side of the vertical meridian, including hemianopia.
- Diplopia within 40 degrees of fixation point (in all directions) of primary position, that cannot be corrected using prism lenses or patching.

Substance Use Disorder

A diagnosis of an uncontrolled substance use disorder, excluding caffeine and nicotine, and patient is non-compliant with treatment recommendations.

- Alcohol
- Other Substances (specify) _____

Psychiatric Illness

A condition or disorder currently involving any of the following: acute psychosis, severe abnormalities of perception, or patient has a suicidal plan involving a vehicle or an intent to use a vehicle to harm others.

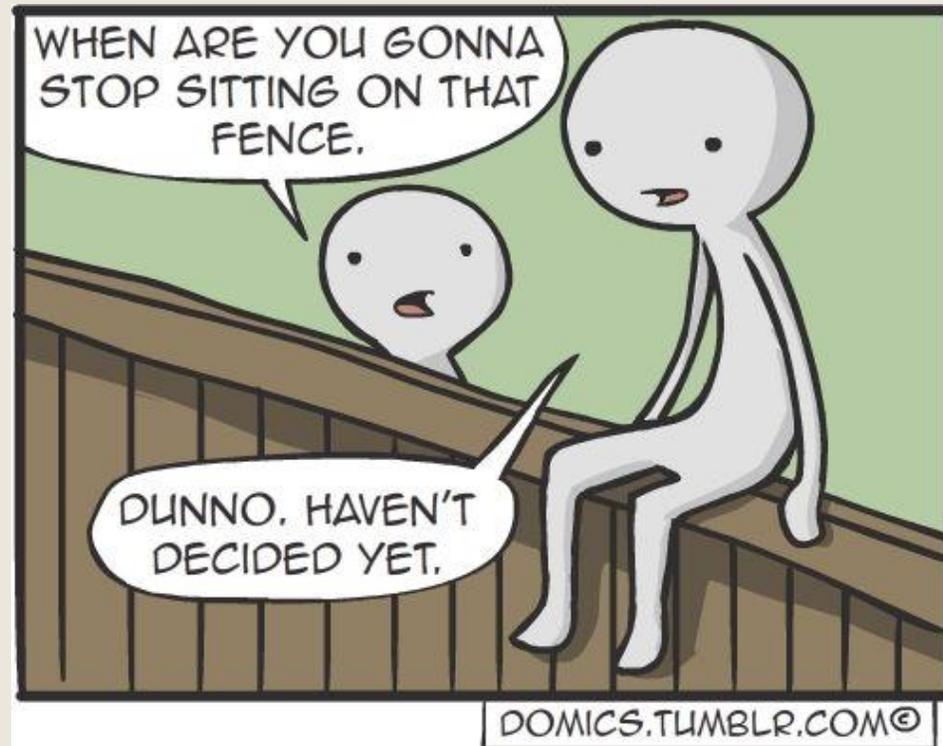
- Due to: _____

Part 4. Discretionary Report of Medical Condition or Impairment

Please describe condition(s) or impairment

- As many as 28% of people with dementia will continue to drive, despite failing an on-road assessment
- Should a physician become aware of a driver whose privileges are known to have been suspended is continuing to drive, the physician has no legal obligation to report the situation to any authority. You can, however contact the CMPA for advice and to document the reasons whether or not to make a follow-up report

Getting off the fence



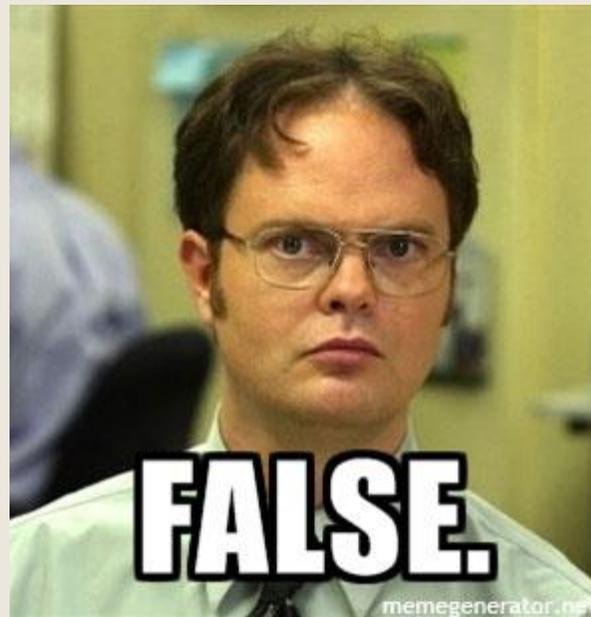
Getting off the fence

Ask yourself:

1. Given the results of your clinical assessment, would you get a car with the patient driving?
2. Would you let a loved one get in a car with the patient driving?
3. Would you want to be crossing a street in front of a car with the patient driving?
4. Would you want to have a loved one cross a street in front of a car with the patient driving?

Common clinician concerns

Can I call the cops on my patient who I know is driving with a suspended license?



Common clinician concerns

I'm worried about ruining the patient-physician relationship



Common clinician concerns

- Do I need to report while my patient is waiting for an on-road test?



Common clinician concerns

- My patient can sue me if I report them to the MTO.



How to have a discussion around driving

- Be firm, non-negotiable. No wiggle room!
- Review the clinical scenario as a whole, don't point out specific deficits on cognitive testing. Don't throw family under the bus
- Communicate your legal obligation but that the ultimate decision rests with the MTO
- Focus on the positives (cost savings)
- Can provide a written notice
- Always ensure patient has someone with them at appointment who can drive them home

Risk Management

- Caution them not to drive until MTO has made their determination
- Document, document, document your assessment, discussion, warning not to drive and your intention to report
- Limit information in report to what is required by legislation
- Address driving issues early!

Support for Caregivers

- Family Caregiver Alliance
- Dementia Advisor “app”
- Alzheimer’s Society

Case 1

- Margaret is 79F who comes to your office with her daughter with concerns about her cognition
- She is a retired bookkeeper
- She lives with her husband. Her daughter says she is having more trouble managing her medications and “she always has to go over a re-set the TV”. She recently got a letter from the bank as she had forgotten to pay her bills (which is what prompted this visit)
- “Doc, my mom had dementia, do I have it too?”

Case 1

- MoCA 24+1
- Trails A 50sec, no errors
- Trails B 3min 20 sec, no errors
- Intersecting pentagons close but still abnormal
- Clock intact

Case 1

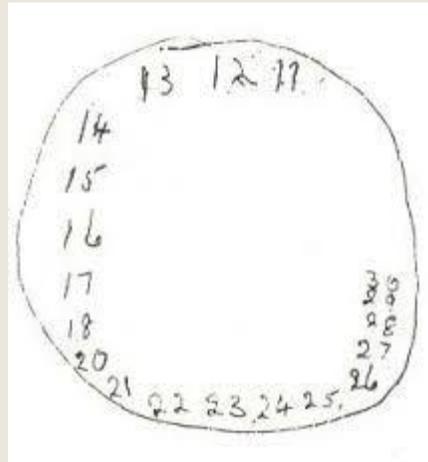
- TSH 10, all other labs normal
- Snoring-positive sleep study
- On CPAP x 1 month
- Objective and subjective improvement in cognition
- Continue to monitor regularly for changes in function and cognitive testing

Case 2

- Frank is an 82M
- Retired lawyer
- He has noticed cognitive changes for the past 2 years
- Family noticed he was mixing up his children, meal quality has gone down, pills were disorganized and old pill bottles noted in the cupboard.
- He was annoyed about “all the bad drivers out there” as he had just been in a accident in the Walmart parking lot last week

Case 2

- MoCA 16
- Trails A 75sec 1 error
- Could not complete trails B sample
- Abnormal pentagons



Billing

- Quick reference for billing can be found at:
- <https://www.mountsinai.on.ca/care/psych/patient-programs/geriatric-psychiatry/prc-dementia-resources-for-primary-care/dementia-toolkit-for-primary-care/billing-codes-and-dementia/dementia-related-billing-codes>

Questions?



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