# DRIVING AND DEMENTIA TOOLKITS FOR HEALTH PROFESSIONALS AND FOR PATIENTS AND CAREGIVERS

PRINT THIS ARTICLE


***Anna Byszewski, MD, MEd, FRCP(C),*** *professor, Faculty of Medicine, University of Ottawa, Division of Geriatrics, Department of Medicine, The Ottawa Hospital, Civic Campus, Ottawa, Ontario; affiliate investigator, Ottawa Hospital Research Institute (OHRI)*

***Frank J. Molnar, MSc, MDCM, FRCP(C),*** *associate professor, Faculty of Medicine, University of Ottawa; medical director, Regional Geriatric Program of Eastern Ontario; affiliate investigator, Bruyere Research Institute; affiliate investigator, OHRI, Department of Medicine*

***Véronique French Merkley, MD, CCFP,*** *assistant professor, Faculty of Medicine, University of Ottawa, Department of Care of the Elderly, Bruyère Continuing Care, Ottawa, Ontario*

***Ruth L.B. Ellen, BScH, MD, FRCP(C),*** *assistant professor, Faculty of Medicine, University of Ottawa, Division of Geriatrics, Department of Medicine, The Ottawa Hospital, Civic Campus*

Correspondence may be directed to abyszewski@ottawahospital.on.ca.


As a group, older individuals are the fastest-growing segment of drivers on the road in North America.[1] As these individuals age and accumulate comorbidities, physicians have the moral, ethical, and in many jurisdictions legal responsibility to address fitness to drive as part of the care they provide. Moreover, in seven of the 10 provinces in Canada, physicians have a legal duty to report any concerns regarding driving safety to their Ministry of Transportation. Primary care practitioners are expected to play a central role in driving-related assessment; however, they often feel that they are lacking the tools required to effectively deal with this issue. A national longitudinal study is currently under way (Candrive[2] at www.candrive.ca) to assess which office-based screening tools will best predict driving safety in older adults.

In the domain of driving, cognitive deficits pose a special consideration.[3] Although assessment of fitness to drive is an essential part of dementia care, the diagnosis of dementia does not necessarily imply an automatic licence suspension.

Health professionals caring for persons with dementia need to ask if they drive, and if they do, then professionals need to follow up with further evaluation to determine the impact of their patients' cognitive deficits on driving safety. Some with mild dementia are still fit to drive, albeit for a limited period of time. Assessing fitness to drive is a particularly challenging aspect of dementia care as it is often an emotionally charged issue that can negatively impact the doctor-patient relationship. Although there is no single tool available at this time, a comprehensive assessment can guide the primary care practitioner. Several tools, however, are available to assist the physician in addressing driving cessation, in general,[4,5] and specifically when dementia is diagnosed.[6,7]

This article provides information regarding two tools specifically developed for the Canadian context that provide a framework for gathering the information necessary to evaluate fitness to drive (immediate or eventual) and to support the process of driving cessation in persons with dementia: (1) the Driving and Dementia Toolkit for Health Professionals and (2) the Driving and Dementia Toolkit for Patients and Caregivers.

## Driving and Dementia Toolkit for Health Professionals

An inter-professional team of clinicians and researchers including geriatricians, nurses, occupational therapists, and physiatrists developed the Driving and Dementia Toolkit for Health Professionals. The content was derived from a needs assessment held with family physicians. This toolkit bridges the gap in addressing this challenging area of dementia care by providing office-based tools and resources.

The toolkit contains a section with background information on driving and dementia, the 10-minute office-based Dementia and Driving Checklist (Table 1), and an algorithm and road map describing how to navigate the process (Figure 1). It outlines how to effectively file a report with the Ministry of Transportation, and includes a sample letter that can be provided to the person with dementia and caregiver(s) as a reminder of the discussion. The toolkit also has recommendations on how to communicate with the person with dementia and caregivers, and provides resources on alternative transportation means and other community services for the person with dementia and family caregivers. There is a section dedicated to people who are clearly at risk (red section), a section for those who are in the uncertain risk zone (yellow section), and one for those who are still safe but need to be monitored (green section).

This toolkit provides invaluable information, strategies, and tools for health professionals in addressing the issue of driving safety with the person with dementia. The original version of the toolkit was subjected to an evaluation.[8] Physicians found that their confidence level in addressing driving in persons with dementia increased with the use of the toolkit. To view the Driving and Dementia Toolkit for Health Professionals, go to http://www.rgpeo.com/media/30695/dementia%20toolkit.pdf.

This toolkit can assist health professionals, including

Table 1. 10-Minute Office-Based Dementia and Driving Checklist*

| **Time: ≤10 minutes. It is not necessary to complete all 10 items if the patient is obviously unsafe to drive based on ≥ 1 item.** | |
|---|---|
| 1. Dementia type | Generally Lewy body dementia (fluctuations, hallucinations, visuospatial problems) and frontotemporal dementias (if associated behaviour or judgment issues) are unsafe. |
| 2. Functional impact of the dementia | According to Canadian Medical Association guidelines, driving is unsafe if there is<br>• impairment of more than 1 instrumental ADL (IADL) due to cognition (SHAFT: shopping, housework/hobbies, accounting, food, telephone/tools);<br>• *or* impairment of 1 or more personal ADL (PADL) due to cognition (DEATH: dressing, eating, ambulation, transfers, hygiene). |
| 3. Family concerns (ask in a room separate from the person) | Do you feel safe/unsafe in the car when the individual with dementia is driving? (Make sure family has recently been in the car with the person driving)<br>The granddaughter question: Would you feel it was safe if a 5-year-old granddaughter was in the car alone with the person driving? (Often produces a different response from family's answer to previous question)<br>Generally if the family feels the person is unsafe, he or she is unsafe. If the family feels the person is safe, the person may still be unsafe as the family may be unaware or may be protecting patient. |
| 4. Visuospatial (intersecting pentagons, clock drawing) | If major abnormalities, likely unsafe |
| 5. Physical inability to operate a car (often a "physical" reason is better accepted) | Medical/physical concerns such as musculoskeletal problems, weakness/multiple medical conditions (neck turn, problems in the use of steering wheel/pedals), cardiac/neurological (episodic "spells") |
| 6. Vision/visual fields | Significant problems including visual acuity, field of vision |
| 7. Drugs (if associated with side effects: drowsiness, slow reaction time, lack of focus) | Alcohol, benzodiazepines, narcotics, neuroleptics, sedatives, anticholinergic, antiparkinsonian, muscle, relaxants, tricyclics, antihistamines (OTC), antiemetics, antipruritics, antispasmodics, and others |
| 8. Trailmaking A and B[†] | Trailmaking A<br>• Unsafe = >2 minutes or 2 or more errors<br>Trailmaking B<br>• Safe = <2 minutes and <2 errors (0 or 1 error)<br>• Unsure = 2–3 minutes or 2 errors (consider qualitative dynamic information regarding *how* the test was performed: slowness, hesitation, anxiety or panic attacks, impulsive or preservative behaviour, lack of focus, multiple corrections, forgetting instructions, inability to understand test, etc.)<br>• Unsafe = >3 minutes or 3 or more errors |
| 9. Ruler Drop Reaction Time test[‡] | Ask the patient to take his or her dominant hand and hold the thumb and first finger 2.5 cm (1 inch) apart. Hold a 30 cm (12 inch) ruler with the bottom end between the patient's thumb and first finger. Tell the patient you are going to let the ruler drop and he or she is to try to catch it .The usual is catching by 15–23 cm (6–9 inches) falling. Failure is the ruler hitting the floor twice. |
| 10.Judgment/insight (ask the person) | What would you do if you were driving and saw a ball roll out on the street ahead of you?<br>With your diagnosis of dementia, do you think at some time you will need to stop driving? |

**Conclusion**[§]

| Safe | Unsafe | Unsure |
|---|---|---|
| Reassess in 6–12 months | Report to provincial registrar | • If only driving is an issue, then refer for a specialized on-road assessment.<br>• If there are other dementia-related issues as well as driving, then refer to specialized dementia assessment services. |

ADL = activities of daily living; OTC = over-the-counter.

*Based on clinical opinion and experience, not evidence. Development lead by and copyright held by Dr. W. Dalziel. Reprinted with permission.

†Source: Trail-Making Tests, at http://www.rgpc.ca/best/GiiC%20Resources/GiiC/pdfs/3%20The%20Trails%20Tests.pdf.

‡Source: Data from Accident Analysis and Prevention 2007;39(5):1056–63.

§Sources: Data from Age and Aging 2009 and the Alzheimer Knowledge Exchange Resource Centre, at https://akeontario.editme.com/Driving.

Available at www.rgpeo.com. Developed by Dr. W.B. Dalziel.

primary care practitioners and occupational therapists, in the discussions around driving cessation with the person with dementia. It contains a fixed generic section, as well as a removable section that can be tailored to individual regions. The latter can hold a list of resources, including useful websites and lists of alternative means of transportation and regional driving assessment centres. The toolkit is available in English and French, in print as well on the web, along with other resources, at http://www.rgpeo.com/en/health-care-practitioners/resources/driving.aspx.

## Driving and Dementia Toolkit for Patients and Caregivers

The Driving and Dementia Toolkit for Patients and Caregivers was developed as a companion resource to the Driving and Dementia Toolkit for Health Professionals. This is a helpful resource for persons in the early stages of dementia and their caregivers (family members, friends, and other support persons). It may also help health professionals to start the conversation around the importance of considering and planning for an eventual retirement from driving. While most people make a sound decision to stop driving when they are no longer safe to drive, some continue to drive when at risk. The goal of this toolkit is to keep safe drivers on the road. It also prepares those who are at future risk of being involved in car crashes to eventually stop driving before becoming involved in a car crash. It also can help those who are already unsafe to stop driving immediately.

The toolkit was developed by incorporating input from three focus

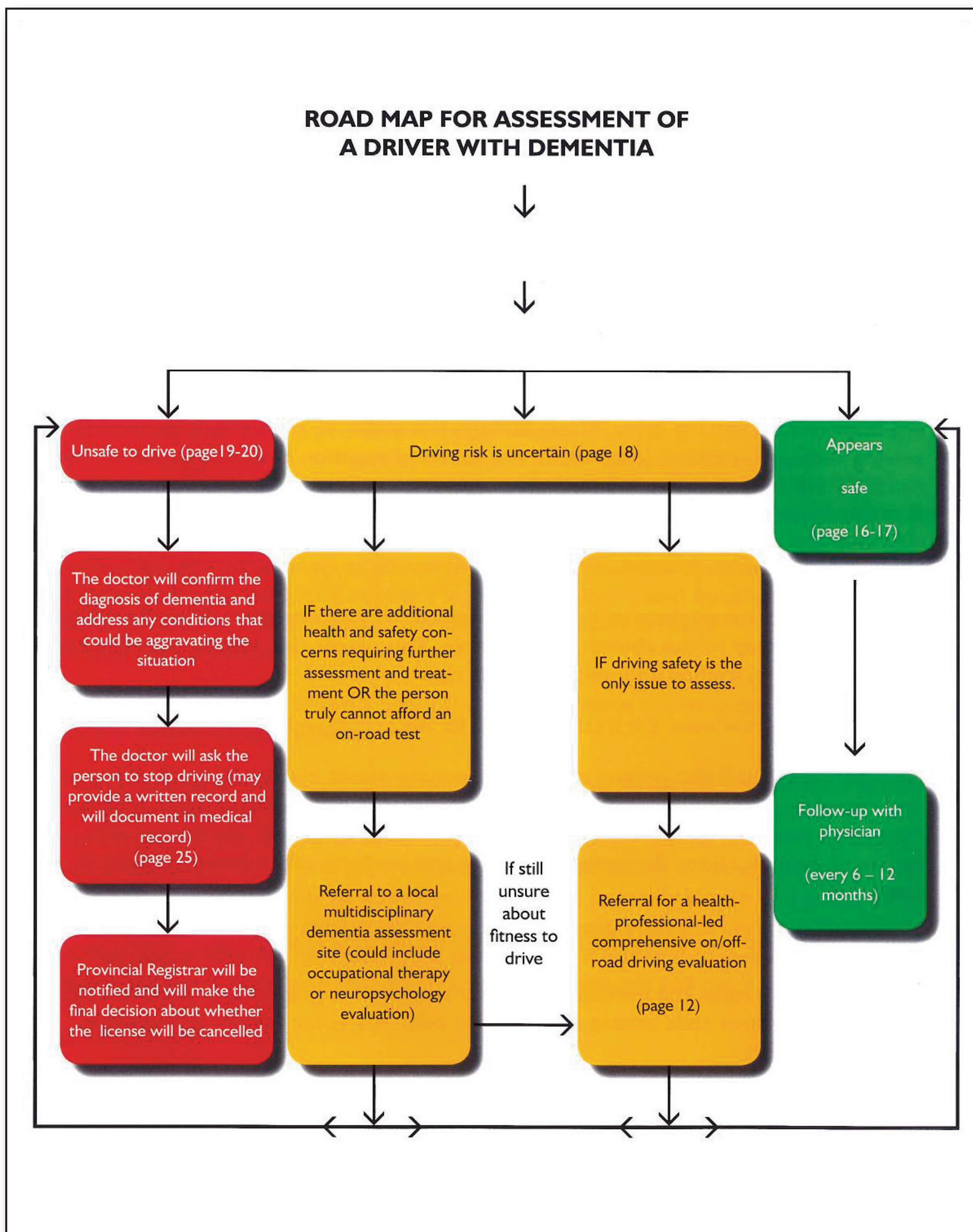


Figure 1. Assessment algorithm. Page numbers refer to Driving and Dementia Toolkit for Patients and Caregivers, available at http://www.rgpeo.com/media/30422/d%20%20d%20toolkit%20pt%20crgvr%20eng%20with%20hyperlinks.pdf.

groups of persons with dementia (early stage) and their caregivers. It was also based on a comprehensive review of the literature and collaborative research. This toolkit contains a mirror algorithm (a road map for assessment of the driver with dementia), similar to that in the toolkit for health professionals, adapted for the person with dementia and the caregivers. It includes a section dedicated to the person with dementia who is clearly at risk (red section), a section for those who are in the uncertain risk zone (yellow section), and a section for those who are still safe but need to be monitored (green section). An "Advance Directive for Driving Cessation" has been reprinted with permission from *The Hartford*©, along with a letter of agreement that can be considered for preparing in advance for driving retirement. Also included is a sample of a doctor's written statement to the person with dementia that can be given to this individual and caregivers, with clearly outlined reasons why this person must stop driving, and to remind them of this need. In the removable section, a "Grief and Adjustment" insert has been prepared for the caregivers to use to support the person with dementia, if necessary. Finally, a list of local websites, assessment sites, and alternative transportation means can be provided. This toolkit can be used by persons with dementia, caregivers, and health professionals who are struggling with this difficult issue. This toolkit is available in both English and French, in print as well as on the web. To see the Driving and Dementia Toolkit for Patients and Caregivers, go to http://www.rgpeo.com/media/30422/d%20%20d%20toolkit%20pt%20crgvr%20eng%20with%20hyperlinks.pdf.

Print copies of both toolkits are available by contacting Dr. Anna Byszewski at abyszewski@ottawahospital.on.ca.

## Discussion

There is a general reluctance to discuss driving cessation, by the person with dementia, the caregiver(s), and clinicians, due to a fear of the repercussions.[9] The person with dementia may lose the privilege of driving and become socially isolated and depressed. The caregivers will have to deal with the emotional fallout and provide alternative transportation. The primary care practitioner may not have all the information or the time to address these issues in a busy office. These two toolkits are meant to assist primary care practitioners in addressing the issue. The first toolkit (Driving and Dementia Toolkit for Health Professionals) can support primary care practitioners by providing tools and strategies to efficiently and effectively address, in an office setting, driving safety. The Driving and Dementia Toolkit for Patients and Caregivers can assist primary care practitioners in supporting the person with dementia and the caregivers by providing additional supporting documentation, counselling tips, and resources.

## Key Points

- *Primary care practitioners, people with dementia, and caregivers often struggle with the assessment of driving risk when a diagnosis of dementia is made.*
- *The primary care practitioner has a responsibility to ensure the safety of both the individual and that of the public at large, while also striving to help the person with dementia maintain his or her independence.*
- *The two Driving and Dementia Toolkits provide information, strategies, and resources to assist the primary care practitioners and those under their care in addressing this issue in the Canadian context.*

## Acknowledgements

The authors wish to acknowledge the following individuals who provided invaluable input into producing the toolkits: (1) The Driving and Dementia Toolkit for Health Professionals – Fara Aminzadeh, Leslie Ann Baillu, William Dalziel, Malcolm Hing, Lynn Hunt, Shawn Marshall, Kelly Robinson; and (2) Driving and Dementia Toolkit for Patients and Caregivers – Fara Aminzadeh, Kelly Robinson, William Dalziel, Leslie Ann Baillu, Malcolm Hing, Lynn Hunt, Shawn Marshall, Veronique French Merkley (Francophone version review), and persons with dementia and caregivers in the focus groups.

The toolkits were printed with funding from the Candrive program and the Regional Geriatric Program of Eastern Ontario.

This article was peer reviewed.

## References

1. National Highway Traffic Safety Administration. Traffic safety facts 2001: older population. Washington (DC): National Center for Statistics and Analysis, 2001; http://www-nrd.nhtsa.dot.gov/Pubs/809475.pdf.
2. Candrive. Driving research for older adults. Ottawa (ON): Candrive; www.candrive.ca.
3. Marshall SC, Man Son Hing M. Multiple chronic medical conditions and associated driving risk: a systematic review. Traffic Inj Prev 2011;12(2):142–8.
4. Canadian Medical Association. Driver's guide: determining medical fitness to operate a motor vehicle. Ottawa (ON): Author, 2007; http://www.cma.ca/determining-fitness-to-drive.
5. American Medical Association. Physician guide to assessing and counseling older drivers. Chicago: The Association, 2012; http://www.ama-assn.org/resources/doc/public-health/older-drivers-guide.pdf.
6. Hartford Foundation. United States, At the crossroads, family conversations about Alzheimer's disease, dementia and driving. Simsbury, CT: Author, 2010; http://hartfordauto.thehartford.com/UI/Downloads/Crossroads.pdf.
7. Molnar FJ, Simpson CS. Approach to assessing fitness to drive in patients with cardiac and cognitive conditions. Can Fam Physician 2010;56(11):1123–9; http://www.cfp.ca/content/56/11/1123.full.pdf+html.
8. Byszewski AM, Graham ID, Amos S, et al. A continuing medical education initiative for Canadian primary care physicians: the driving and dementia toolkit: a pre- and postevaluation of knowledge, confidence gained, and satisfaction. J Am Geriatr Society 2003;51(10):1484–9.
9. Byszewski A, Molnar F, Aminzadeh F. The impact of disclosure of unfitness to drive in persons with newly diagnosed dementia: patient and caregiver experiences. Clin Gerontol 2010;33(2):152–63.