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Research to Practice: Driving Cessation and Dementia

The number of older adult drivers with dementia is increasing—and with it, so too must our understanding of the day-to-day experiences of older drivers with dementia, their functional abilities and the transportation options best suited to them. Both researchers and practitioners are seeking to better understand the link between dementia, driving performance and eventual driving cessation. A review of relevant research and resources was commissioned by the Alzheimer's Association in 2010 as part of a National Highway Traffic Safety Administration-funded Driving and Dementia initiative. This research-to-practice article provides insight into current knowledge about the transition from driving for older adults with dementia. What follows is a synopsis on how these findings may impact caregiving for older adults and their interaction with supportive services in their community.

Warning Signs

People with a close relationship to an older-adult driver will be the first to observe the warning signs of at-risk driving linked to symptoms of dementia. While some signs may be obvious, others may be more subtle or emerge gradually. Key warning signs identified by the Beverly Foundation (2008) along with AARP and The Hartford (2011) include: accidents (or near-accidents), getting lost, responding

more slowly to unexpected situations, receiving traffic tickets in the past several years, failure to notice traffic signs, and scrapes or dents on the car, mailbox or garage.

Assessment and Evaluation

Caregivers may observe dangerous driving firsthand or may become concerned about the safety of an older adult based on the identification of symptoms in the dementia spectrum. In order to better gauge driving ability and safety on the road, caregivers may want to urge an older adult to undergo specialized evaluation by a certified driving rehab specialist. The Alzheimer's Association's review of the literature included examination of the field of evaluation tools, including cognitive tests, simulator driving tests, performance-based road testing, and medical license renewal exams.

Available research indicates that while single cognitive tests have not been effective in predicting driving performance (Frittelli et al., 2009), an "effective battery" of multiple cognitive tests may identify unsafe driving, which should be supplemented by follow-up evaluations, including on-road testing (Lincoln et al., 2006) (Vanderbur & Silverstein, 2006). While simulator testing, which could include computer software, is less costly and can approximate road conditions reasonably well, research points to the

gold standard of on-road testing. Unfortunately, road tests are not covered by insurance and, to be completely effective, are not likely to be a one-time cost. Testing as frequently as every six months may be advisable (Carr et al., 2006).

The Caregiver Role

Both research and practical experience point to the paramount importance of family members and close friends in understanding older adults' driving patterns. Close family, friends and caregivers are most likely to be the ones who support an older adult through the transition from driving to alternative transportation. Operationalizing the ways in which we define older-driver ability on the road and fitness to drive will go a long way in helping older adults and caregivers understand what steps to take to ensure safe mobility. If caregivers are made aware of effective modes of assessment that take into account the autonomy of the older adult driver with cognitive impairment, they will be able to make decisions that are both informed and sensitive.

Caregiver intervention can be a difficult and trying process, even if the assessment process yields a definitive answer around which family members and loved ones come to consensus. The literature identifies two broad categories of approaches caregivers may adopt during driver transition: an involved strategy and imposed approach. The involved strategy includes drivers with dementia in the decision-making process and helps them to understand the necessity of driving retirement to their safety and that of the general public (Byszewski et al., 2010). The imposed approach, which The Hartford (2010) refers to as strictly a "last resort," involves such measures as taking away the car keys and removing the car from a residence.



Driver helping a passenger get out of a car.

Having the Talk

A study by Croston et al. (2009) found that guidance from family members and doctors were among the top factors in driving cessation. While family caregivers are often at the forefront of driving intervention, many older adults with dementia are reluctant to reduce or cease driving. A neutral authority figure outside the family, such as a physician, could be helpful in making the case for transition. In one study reviewed, a majority of the caregivers agreed with the doctor's suggestions and tried to support them (Byszewski et al., 2010).

Doctors, however, may not have a specific background in the dementia and driving intersection and may not be aware of all of its dimensions. While a paucity of tools can predict fitness to drive (Vanderbur & Silverstein, 2006), the American Medical Association and the National Highway Traffic Safety Administration recently published the second edition of their *Physician's Guide to Assessing and Counseling Older Drivers* (Carr et al., 2010). This useful resource includes the Assessing Driving Related Skills (ADReS) tool. This publication also addresses the concept of working memory (drivers must be able to retain certain information while simultaneously processing additional information), a skill which tends to decline with age.

- **5.2 million** Americans over the age of 65 have Alzheimer's disease. This number is estimated to increase to approximately **7.7 million** over the next 20 years. (Alzheimer's Association, 2011)
- An estimated **30%** of older adults diagnosed with some form of dementia are currently on the road. (Carr et al., 2006)
- Permanent driving cessation for older adults is "one of the **most significant** and deeply personal losses they will face." (Stern et al., 2008)
- An estimated **83%** of caregivers were responsible for driving or arranging transportation for their loved one. (National Alliance for Caregiving, 2009)

Another concern is that the family doctor may be hesitant to offer advice for fear of legal liability. Standards of reporting vary by state: physicians are responsible to report unsafe drivers in 12 states and can do so voluntarily in 22 others (Eby & Molnar, 2010). Training materials have been developed to address the gaps and inconsistencies. That caregivers should take a holistic approach—one that includes doctors, aging professionals, mobility managers and others—is one potential implication of the research.

Another study, an evaluation of the Crossroads Guide by The Hartford, explored the use of a group intervention targeted to caregivers. Caregivers who experience a group intervention may be better prepared to have the discussion about driving cessation with an older adult close to them and to be "aware of the importance of the cessation process and what it entails" (Stern et al., 2008).

Conclusion

Given the demographic imperative, the issue of dementia and driving cessation is of growing concern for family caregivers and our society at large. This overview highlights a portion of the growing body of knowledge in this arena. While research and best practices are still emerging, it is clear that addressing the issue will require a multidisciplinary approach that relies heavily on the invaluable contributions of caregivers.

This article was adapted from a review conducted in 2010 by Corina Oala, doctoral student in the University of Massachusetts Boston's Gerontology program, for the Alzheimer's Association as part of a National Highway Traffic Safety Administration-funded Driving and Dementia initiative. NCST partnered with the Alzheimer's Association to provide information, resources and expertise about driving and senior transportation issues to Oala for the review.

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References and Resources

- AARP and The Hartford. (2011). *We Need to Talk – online seminar*. Retrieved 3/30/2011 from www.aarp.org/weneedtotalk
- Alzheimer's Association. (2011). *Alzheimer's disease facts and figures*. Retrieved 3/30/2011, from http://www.alz.org/downloads/Facts_Figures_2011.pdf
- Beverly Foundation. (2008). *Transportation & Dementia*. Retrieved 7/12/2010, from <http://www.beverlyfoundation.org/media/factsheet/factsheet.vol.1.no.8.transportation.dementia.pdf>
- Byszewski, A.M., Molnar, F.J., & Aminzadeh, F. (2010). *The impact of disclosure of unfitness to drive in persons with newly diagnosed dementia: Patient and caregiver perspectives*. *Clinical Gerontologist*, 33, 152-163.
- Carr, D.B., Duchek, J.M., Meuser, T.M., & Morris, J.C. (2006). *Older adult drivers with cognitive impairment*. *American Family Physician*, 73(6), 1029-1034.
- Carr, D.B., Schwartzberg, J.G., Manning, L., & Sempek, J. (2010). *Physician's Guide to Assessing and Counseling Older Drivers*, 2nd edition, Washington, D.C. National Highway Traffic Safety Administration.
- Croston, J., Meuser, T.M., Berg-Weger, M., Grant, E.A., & Carr, D.B. (2009). *Driving retirement in older adults with dementia*. *Topics in Geriatric Rehabilitation*, 25(2), 154-162.
- Eby, D.W., & Molnar, L.J. (2010). *Driving fitness and cognitive impairment*. *Journal of the American Medical Association*, 303(16), 1642-1643.
- Frittelli, C., Borghetti, D., Iudice, G., Bonanni, E., Maestri, M., Tognoni, G., Pasquali, L., & Iudice, A. (2009). *Effects of Alzheimer's disease and mild cognitive impairment on driving ability: A controlled clinical study by simulated driving test*. *International Journal of Psychiatry*, 24, 232-238.
- The Hartford. (2010). *At the crossroads: Family conversations about alzheimer's disease, dementia, & driving*. Retrieved 7/12/2010, from http://www.thehartford.com/alzheimers/105052_7_Rev_Crossroads_Bro.pdf
- Lincoln, N.B., Radford, K.A., Lee, E., & Reay, A.C. (2006). *The assessment of fitness to drive in people with dementia*. *International Journal of Geriatric Psychiatry*, 21, 1044-1051.
- National Alliance for Caregiving in collaboration with AARP. (2009) *Caregiving in the U.S.*
- Stern, R.A, D'Ambrosio, L.A., Mohyde, M., Carruth, A., Tracton-Bishop, B., Hunter, J.C., Daneshvar, D.H., & Coughlin, J.F. (2008). *At the Crossroads: Development and evaluation of a dementia caregiver group intervention to assist in driving cessation*. *Gerontology & Geriatrics Education*, 29(4), 363-382.
- Vanderbur, M., & Silverstein, N. M. (2006). *Community mobility and dementia DOT HS 810 684*. Retrieved 7/12/2010, from <http://www.nhtsa.gov/people/injury/olddrive/CommMobilityDementia/pages/contents.htm>