

# Monitor Driving Ability in Persons With Dementia

*Ask the patient and family about specific driving behaviors, and consider vision, medications, and age.*

BY KERRI WACHTER  
Senior Writer

SAN JUAN, P.R. — Not all older patients with dementia are dangerous drivers, making individual assessments of fitness to drive crucial for road safety, Dr. John C. Morris said at the annual meeting of the American Association for Geriatric Psychiatry.

It's no surprise that increasing dementia severity is a risk factor for unsafe driving. About 30% of demented people continue to drive. "We know that all demented drivers—at some point in the course of their dementia—will become unsafe," said Dr. Morris, professor of neurology at Washington University, St. Louis.

Demented drivers have a twofold increased risk of crashing, compared with age-matched nondemented individuals. "In particular, they're at increased risk of fatal crashes," Dr. Morris said.

Despite the potential danger, few older adults with dementia want to stop driving. "It's no surprise that older adults do not want to relinquish driving," he said. Driving is a crucial means of transportation for many older adults—losing the ability to drive means losing autonomy. Without the

ability to drive, older adults are at greater risk for social isolation and depression.

For many older adults, the issue of fairness also comes into play. They don't believe it is fair to have to give up driving when they have never had an accident.

"It's very important for older adults—they are safe to drive—to be able to continue to do so," Dr. Morris said. As a starting point, ask not only the patient but also family and caregivers about problematic driving behaviors whenever you evaluate an older adult. In particular, ask about the following unsafe behaviors that are typically exhibited by older adults with dementia:

- ▶ Failing to stay in their lane or to maintain proper distance.
- ▶ Driving at improper speeds (too fast or too slow).
- ▶ Ignoring or failing to comprehend road signs.
- ▶ Failing to signal, check traffic, or react to other drivers.
- ▶ Becoming lost.
- ▶ Having accidents, even "fender benders."
- ▶ Receiving citations.

Driving simulators provide a safe testing environment and can help determine whether a person with dementia is safe on the roads.

Road tests, however, may be the standard by which other evaluation methods are measured, Dr. Morris said. These tests provide a reliable, direct measure of a person's driving ability but require special equipment and can be costly.

Finally, there is physician judgment based on information from the patient and family, cognitive measures, and physical examinations. Physicians actually do a fairly good job of evaluating a patient's ability to drive safely, Dr. Morris said. According to one study, physicians are accurate roughly three-quarters of the time in determining whether a person has the ability to drive safely (*J. Am. Geriatr. Soc.* 2005;53:94-8).

Age alone appears to be a risk factor for unsafe driving as well. Studies indicate that periodically monitoring older patients for driving ability is important. At-risk drivers should be reevaluated about every 6 months.

Here's the approach that Dr. Morris and his colleagues at Washington University's Alzheimer's disease research center use when dealing with the issue of dementia and driving:

- ▶ Routinely ask the patient and family members if the patient is driving and, if so, about any problems or risks.
- ▶ Assess any comorbid factors, such as medications and visual impairment.
- ▶ If the patient with dementia wishes to drive and reportedly can do so safely, re-

quire confirmation with a road test.

- ▶ If the patient performs safely on the road test, allow continued driving until a follow-up road test is done in 6-12 months.
- ▶ If the patient is determined to be an unsafe driver following a road test, initiate driving cessation.

"The most difficult part is, how do we get an older person to stop driving?" Dr. Morris asked. Appealing to the older driver's judgment usually does not work, but it is very important to maintain the patient's dignity during this process, he said. Going over with the patient and family the reasons why he or she should stop driving is sometimes helpful. "It has more weight coming from a physician," said Dr. Morris, who also gives his patients a written reminder—a prescription—that they may not drive.

The family has to be involved in enforcing the decision. It's also important that the family work to provide an alternative means of transportation for the patient. In extreme situations, when the patient is determined to continue driving, the family may have to consider simply selling the car. ■

*Dr. Morris recommended these Web sites for more information about older drivers or drivers with dementia:*

- ▶ [www.ama-assn.org/go/olderdrivers](http://www.ama-assn.org/go/olderdrivers).
- ▶ [www.alz.org](http://www.alz.org).
- ▶ [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov).

## Technology Helps Prevent Wandering, Falls by Elderly Residents

BY MARY ELLEN SCHNEIDER  
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DALLAS — Motion sensors and radio frequency devices may not be the first things that come to mind when thinking about long-term care patients, but these technologies are playing a key role at one residential care facility near Portland, Ore.

Lydia Lundberg and Bill Reed, co-owners of Elite Care, have developed Oatfield Estates, a group of residential care facilities that combine extended family-style living with high-tech capabilities. The six houses are located in a quiet, residential neighborhood. Each facility includes 12 resident suites and 3 live-in suites for staff members.

"We wanted to create an environment where we would want to live in another 30 years when we need help with our [activities of daily living]," Ms. Lundberg said at the annual symposium of the American Medical Directors Association.

The technology incorporated into the facilities is aimed at better tracking residents and staff, and providing alerts about potential falls or wandering. It also allows the staff to accommodate residents with dementia without having a locked facility, she said.

For example, residents and staff wear a wireless pendant at all times that allows the management at the facility to track everyone's movements. The pendant uses infrared and radio frequency signals.

The data allow the management to generate reports about how much time a particular staff person has spent with a resident in his or her room, for example. The pendants are well accepted by staff and can be very helpful when discussing care plans with family members, Ms. Lundberg said. Often, "the families are in denial about how much time their parents need," she said, adding that the device's radio frequency is similar to what is used in wireless house phones or TV remote controls.

The facility also uses technology to alert staff to po-

tential falls by residents. For example, load cells—which measure the variation in weight placed on an object—are built into most beds to create an alert that lets staff members know when residents get out of bed. The alert is used only for residents who are at risk of falling. That way, staff can check on them when the residents are out of bed to ensure they haven't fallen, Ms. Lundberg said.

Other technology is aimed at making sure residents who have dementia don't wander. There are sensors on the residents' doors that allow staff to know when residents are leaving or entering, and sensors on the driveway to detect when residents get too close.

If residents remove their pendants and attempt to wander off, a sensor on the driveway sets off lawn sprinklers, which stops them most of the time, Ms. Lundberg said.

Technology also is used to collect information on time spent in bed, weight changes, call history, socialization, activity level, and other measures. If the resident has agreed, family members can track the resident's status on several measures through a secure, online family portal. Being able to provide this access means family members are more likely to support actions by staff, instead of questioning them, Ms. Lundberg said.

"The data stream allows you to predict and adapt to changing conditions of the residents," she said.

The cost of installing the sensors and software in each suite is \$4,000 and slightly more for double occupancy, Ms. Lundberg said. Service and upgrades are extra.

In addition, residents pay about \$3,450 in base rent at the facility, plus care services. So the average monthly cost for a resident is about \$4,200, according to Ms. Lundberg.

Ms. Lundberg is not the only one looking at technology in the long-term care field. The Alzheimer's Association, along with Intel Corp., has funded 10 projects during the past 2 years as part of its Everyday Technologies



**Versus Information Systems badges use infrared signaling technology to pinpoint the current location of residents.**

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for Alzheimer Care grant program, said Dr. Eric G. Tangalos, professor of medicine and codirector of the Kogod Program on Aging at the Mayo Clinic in Rochester, Minn.

The grant projects have looked at a range of research topics, including audiovisual prompts for Alzheimer's patients to complete their daily living activities, and Internet-based support tools for caregivers.

One project conducted at the University of Toronto looks at ways to help people with dementia improve their handwashing. The researchers used a desktop computer, a camera mounted over the sink, and audio prompts. The relatively low-tech intervention gave patients more independence since they required less direct help from nurses and other caregivers, Dr. Tangalos said. ■