

SPECIAL REPORT

Every day, we are all getting older. With better health care, life expectancy is rising. For a population that has enjoyed the personal freedom the automobile offers, a potential danger looms.



WHAT TO DO ABOUT ELDERLY DRIVERS

BY KEVIN A. WILSON



When an elderly driver lost control of his Buick Le Sabre, scything through crowds in a Southern California farmer's market at speeds up to 60 mph, killing 10 and injuring more than 50 others, some said it was a wake-up call.

What to do about elderly drivers isn't a new question, but it earned renewed focus after that incident. State legislatures and motor vehicle departments began the politically charged process of reevaluating licensing laws and adding special requirements. Researchers began providing guidance—learning to identify which drivers most need testing and developing ways to assess their abilities. A growing number of occupational therapists and rehabilitation specialists focused on helping elderly drivers maintain their abilities. Others sought out alternative transportation for those who gave up their keys.

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But if that 2003 accident was a wake-up call—the now-90-year-old driver, George Weller, was found guilty on 10 counts of vehicular manslaughter and was sentenced last November to five years of probation and more than \$100,000 in fines and restitution—the klaxon keeps sounding. Just this past January, in Shiloh, Illinois, an 84-year-old woman failed to negotiate the last turn on her route, and her '92 Chevy Cavalier crashed through a cafeteria wall of an elementary school, killing an eight-year-old boy and injuring two other children. The sad irony: She was on her way to a refresher course for elderly drivers held at a nearby senior center.



HOW BIG A PROBLEM?

THESE CASES GENERATE SPECTACULAR headlines because they are atypical and frightening. They're atypical because though drivers older than 80 die in traffic accidents at a higher rate per 100,000 miles than for all other age groups except for young males—because of their frail health; their involvement in accidents doesn't rise as dramatically—these drivers survived. And frightening because the victims weren't even the occupants of other vehicles but were innocently going about their routines. Statistically, elderly drivers are disproportionately represented in pedestrian deaths but, again, not at as high a rate as for young drivers.

In fact, one accident typical of elderly drivers rarely makes headlines: a left turn at an intersection where the elderly driver fails to see or misjudges the speed of oncoming traffic. And he or she isn't even always at fault; often the other driver is speeding or drunk. Those with faster reflexes or quicker decision-making processes may have only a close call, not a collision. Regardless of which car hits the other, or why, an elderly driver most likely will show up in the fatality records.

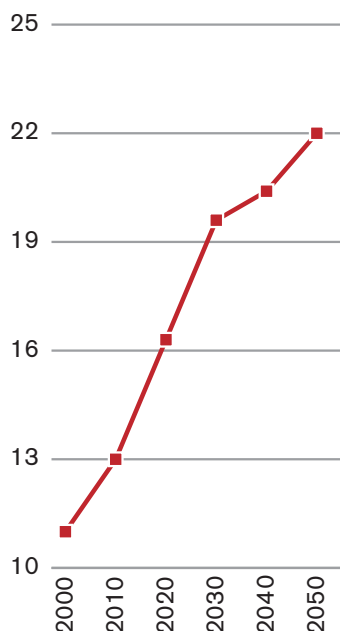
High-profile accidents like Weller's might grab headlines, but as indicators of America's aging-driver problem, they give a false impression. They're like lightning strikes—your chances of being

hit by the bolt are low, but the flash and boom alert you to an oncoming storm. Odds are the lightning will miss you, but the wind hits us all.

Here is what's in the wind: By the year 2030, we'll have 70 million people in the United States older than 65, twice as many seniors as today. Their representation in the licensed driving populace is expected to climb from 11 percent to one in four, as a result of greater longevity, improved health care and the aging of the

POPULATION TREND

By 2030, the portion of the U.S. population older than 65 will double



> Ford Motor Company developed its "Third Age Suit" to help engineers experience the limitations that affect elderly drivers. Here, Eeero Laansoo, Ford human factors engineer, demonstrates the suit's use in analyzing the appropriateness of Ford vehicles for operation by older adults.

baby boom generation.

We've built lifestyles and communities in the expectation that we all can drive our own cars wherever and whenever we need to. Result: Since 1980, the accident rate among elderly drivers has risen, so now the involvement on a per-mile-driven basis is higher than for all but the youngest male drivers. The elderly tend to drive many fewer miles, so in raw numbers, they're not nearly as big a danger to the greater population as are younger drivers. But if it's you or a loved one having trouble, that's small comfort.



RESTRICT DRIVING BY AGE?

"IMPEDIMENTS TEND TO INCREASE with age, but age alone is not itself a risk," says Leonard Evans, author of *Traffic Safety and the Driver* (1991) and the more recent *Traffic Safety* (2004), explaining that a public policy approach to elderly driving can't be focused only on age. If it were, he says, you'd be better off renewing the license of every 80-year-old woman and denying all 20-year-old men.

Every driver is an individual, and there are people younger than 50 who use medications that can make them drowsy or who have poor vision or motor impairments. There are drivers older than 80 who are on top of their skills and their health and could show their grandchildren a thing or two behind the wheel.

"Typically, young drivers crash because of behavior issues," such as drinking, speed, or distraction, says Evans. "Older drivers tend to be more obedient of speed limits and road regulations, but if they do crash, it's because of performance issues. But that's an average."

Which begs the question: What happens as we age? The age effects that impair driving break down into three main areas: vision degradation, slowing of cognitive skills and motor impairment. The one that gets the most attention is deterioration of vision, the sense that gives a driver 90 to 95 percent of the information he or she needs to negotiate traffic successfully. There's also degradation in hearing and a slowing in reaction time—about 2 percent every five years, beginning at age 20. A loss of muscle strength



GIVING UP YOUR KEYS

How do you know when it's time to retire as a driver? It may be easier to make that judgment about someone else—a loved one, a neighbor, a friend—than about yourself. The AAA Foundation for Traffic Safety offers a computer program called Roadwise Review to help people evaluate their own abilities by testing vision and cognitive skills. We've reviewed the program and think it would be helpful to any person struggling with disabilities, age-related or otherwise. It's available for \$15 from your local AAA office or www.seniordrivers.org. In the interest of maintaining privacy, the program doesn't record the specific results of the tests unless the user asks to have a summary saved to the computer hard drive.

The AARP offers the following checklist of signs to watch for if you're wondering if it's time to give up the keys:

- Feeling uncomfortable and nervous or fearful while driving.
- Dents and scrapes on the car or on fences, mailboxes, garage doors, curbs, etc.
- Difficulty staying in the lane of travel.
- Getting lost.
- Trouble paying attention to signals, road signs and pavement markings.
- Slower response to unexpected situations.
- Medical conditions or medications that may be affecting the ability to handle the car safely.
- Frequent close calls (almost crashing).
- Trouble judging gaps in traffic at intersections and on highway entrance/exit ramps.
- Other drivers honking at you and instances when you are angry at other drivers.
- Friends or relatives not wanting to drive with you.
- Difficulty seeing the sides of the road when looking straight ahead.
- Easily distracted or having a hard time concentrating while driving.
- Having a hard time turning around to check over your shoulder while backing up or changing lanes.
- Frequent traffic tickets or warnings by traffic or law enforcement officers in the last year or two.

The AARP suggests that if any two of these apply to you, it's time to consider retiring as a driver, or at least having your abilities evaluated for possible remediation.

—KAW



TROUBLE SIGNS

The demographic wave of baby boomers may be impetus enough to focus on elderly drivers, but many boomers are already caretakers for aged parents. That's when people typically hit the powerful emotions involved in the decision to give up driving in America. Driving means mobility, independence, autonomy and control over your own life; to surrender a driver's license typically triggers depression and reduced involvement in social activities. Research shows these consequences have cascading effects on the retired driver's health and mortality.

According to AARP, AAA and other authorities, caretakers should watch to see whether the driver:

- Drives at inappropriate speeds, either too fast or too slow.
- Asks passengers to help check if it is clear to pass or turn.
- Responds slowly to or does not notice pedestrians, bicyclists and other drivers.
- Ignores, disobeys or misinterprets signs and traffic lights.
- Fails to yield to cars or pedestrians who have the right of way.
- Fails to judge distances between cars correctly.
- Becomes easily frustrated and angry.
- Appears drowsy, confused or frightened.
- Has one or more near accidents or near misses.
- Drifts across lane markings or bumps into curbs.
- Forgets to turn on headlights after dusk.
- Has difficulty with glare from oncoming headlights, street lights or other bright or shiny objects, especially at dawn, dusk and night.
- Has difficulty turning head, neck, shoulders or body while driving or parking.
- Ignores signs of mechanical problems, including underinflated tires. (One in four cars has at least one tire that is underinflated by eight pounds or more; low tire pressure is a major cause of accidents.)
- Has too little strength to turn the wheel quickly in an emergency, such as a tire failure or a child darting into traffic.
- Gets lost repeatedly, even in familiar areas.
- Drives a car that shows up with unexplained dents or scratches, especially if the driver tries to conceal the damage or is evasive when asked about its origins.

If you see these signs, it's time for a talk with the driver, his or her physician or the licensing authorities and to seek a professional evaluation.

—KAW

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and flexibility can further increase the time it takes to move your foot from accelerator to brake (sometimes to distinguish between them) and to turn your head to see mirrors or to check blind spots. Add possible drowsiness caused by medications, reduced ability to focus or concentrate and a lower tolerance for alcohol.

If vision problems get the most attention, though, they're not properly understood or analyzed at the regulatory level, say leading researchers. A typical eye exam conducted at a state licensing bureau centers on visual acuity, the ability to see at a distance as expressed on the classic 20/20 scale. That's not the only important aspect of vision for driving. What you see when you're driving depends on your ability to discern contrast, to shift focus from one distance to another—dashboard, mirror, oncoming traffic, roadside signs and overhead signals—and to perceive angles of motion and speeds, as well as the size of your field of vision, including peripheral. If, as seems unlikely, a driver's vision were impaired in only the acuity test and healthy in all other respects, he or she could conceivably drive safely.

"If you look at the data," says Dr. Phillip Hessburg, president of the Detroit Institute of Ophthalmology, "even people with markedly reduced vision don't have increased crash rates, mostly because they self-limit. Typically, they stop driving at night first, then during rush hour, or on fast highways, and in bad weather."

Older drivers also tend to compensate in other ways. Aware of their longer reaction times, they try to leave a greater following distance and travel at or below speed limits. Unfortunately, these rational attempts to adjust are rarely appreciated by younger, less patient road users.

Hessburg adds that, conversely, those who pass the single acuity test typically can have serious impairments in other visual abilities that would impede their performance as drivers.

"These exams at the state licensing bureau are done in a hurry by people with spotty training on overworked equipment that isn't well maintained; they're not good visual exams like you'd get from a doctor," he says. "So it's a



IN THE NEWS

> February 2007: Therese Smith, 80, of Boca Raton, Florida, got "drive" instead of "reverse" and crashed into the Department of Motor Vehicles office in Deerfield Beach, Florida. She was there for a re-examination. Her car's passenger door didn't work, so she couldn't take the test and had the accident while leaving. Although charged with careless driving, her license remained valid.

patchy screening at best." When Hessburg's patients fail the state eye exam, they frequently find that by retaking the test on another day or at another office, they can pass.

Doctors are under a professional obligation—and a legal one in many states—to report patients they believe could be dangerous on the road. It is here, Hessburg says, that he hits a potentially lethal Catch-22 in the system.

Michigan "won't just take the driver's name and address; you have to have their license number," he says. "If I ask to see a patient's license, he asks why. So I tell him I need to report him to the state, and he declines to show me his license. And the state refuses to take the report without the number."

When a doctor, a family member or another interested party reports a driver to the licensing authorities, the state typically demands an in-person renewal, an eye exam and perhaps a road test.

But these tests—indeed, licensing requirements—vary widely from state to state. "Every one of these states," says Hessburg, flipping through a folder of information the American Medical Association provides to doctors, "has different regulations, not because people are different or driving conditions are different. It's because no one agrees on what it should be."

That, says Dr. Cynthia Owsley of the School of Medicine at the University of Alabama in Birmingham, is because we don't have good research on what happens with an individual driver that makes him or her safe or unsafe.

"I can't tell you how many calls I take from state highway people or policymakers looking for a scientific basis to address these things," says Owsley. "It just isn't there."

Owsley's credentials and publications on aging-driver-related topics are extensive, going back 15 years. Her doctorate is in psychological research, and she's done fellowships in ophthalmology and gerontology. She can demonstrate that cataract surgery vastly improves the performance of elderly drivers, but as a practical matter, she can address such matters only on an individual basis. "Until we can get a government or, far less likely, a private enterprise to fund

STATE LICENSING RULES ARE ALL OVER THE MAP

THE FAMILY OF A SECOND-grader killed when an 84-year-old woman crashed her car into an elementary school cafeteria in Shiloh, Illinois, in January issued a statement the next day, concluding: "We very much support a mandatory limit on the driving age for seniors."

issue licenses to disabled individuals of any age and foresees a future of graduated licensing much like what is done for new young drivers. Instead of gradually expanding privileges as is done with teens, though, graduated licensing for elderly drivers would downgrade privileges step by step until such time—if ever—as the driver hangs up the keys.

If there were widespread agreement on such a plan, it would be seen in state licensing requirements across America, just as graduated li-

only other state that requires a road test for drivers older than 75 is New Hampshire, where the renewal term is five years; in Indiana, there's a road-test requirement over age 80. Researchers in the field are coming to agree that if age-related testing is to become part of state licensing requirements, 75 is the most effective age to choose.

In many states, though—Nebraska, Michigan and Mississippi among them—there are no age-related requirements for license renewal, and

is required to apply for license renewal in person. If license examiners suspect a problem—visual, physical or mental—the driver will be asked to take a road test before renewal. At that stage, the driver has a choice: Test for a full license or for a restricted license. The road test for the latter is done along routes the driver customarily uses—market, doctor, senior center, whatever destinations are common for that driver. If the elder driver passes the local test, the restricted license is good only on those roads and



Although the family's statement was laden with grief and anger, that's very often people's first reaction upon hearing such stories: If we can make people wait until they're 16 or 18 years old to get a full driving license, shouldn't we make them surrender it at a set age?

AARP, the advocacy group for people older than 50, says not, arguing that age alone isn't a good indicator of how well any individual can drive and pointing out that the sorts of physical infirmities that come with age also can be found among younger individuals. AARP suggests that a more suitable model is the way states

licensing for teens has become commonplace. Such a consensus is not yet evident, however.

Ironically, Illinois has one of the more aggressive programs for licensing of elderly drivers. Once you reach age 75 in that state, you can no longer renew by mail, and on-road testing is required at each four-year renewal; at ages 81 to 86, the renewal term shortens to two years, and after that age, annual renewal and road testing are required. A driver can be issued a daytime-only license in that state, a relatively common restriction available in those states that do offer some form of restricted license. But the

no written or road test is required unless the driver's license has expired or has been suspended, revoked or canceled. No state denies a driver's license strictly on the basis of age.

Most states will assess any individual called to their attention by police, a relative or the person's physician, regardless of age, but the requirements for such reporting vary widely. Similarly, eye tests are frequently done at renewal, but the specific requirements vary from state to state.

Another form of restricted licensing is offered in Iowa, where any driver older than 70

may be further restricted regarding time of day or maximum speed allowed. North Carolina is another state that issues restricted licenses, including "no interstate," speed restrictions and daytime-only licenses. The only age-based element in the state's licensing program, though, is that those older than 60 are excused from the parallel-parking portion of a road test.

You can find an outline of age-related licensing requirements at the Insurance Institute for Highway Safety's website, www.iihs.org. The direct link is www.iihs.org/laws/state_laws/older_drivers.html. —KAW

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the biomedical research, we really can't offer much guidance. There's no science that tells policymakers what we should be doing with licensing.

"I sympathize," Owsley says. "The regulators are under pressure from their administrations and legislators, the legislators are under pressure from their constituents, so they're going to take steps. But we can't really say what will or won't work on the licensing level until we have some comprehensive research."



WHAT CAN WE DO NOW?

STATISTICAL RESEARCH IN ANOTHER department at the med school in Birmingham shows that states requiring in-person renewal of licenses for drivers older than 85 have reduced fatalities, but reasons for this are speculative. When that study was published in 2004, the lead researcher commented that while states use "a variety of measures to increase the stringency of the licensure process for elderly individuals . . . in-person renewals was the only one that significantly lowered driver fatalities among older drivers."

For nearly a decade, Hessburg and the DIO hosted a biennial conference on "The Eye and the Auto" in conjunction with the Detroit-area "Eyes on Design" car show, trying to get the automotive industry involved in this area of research. There should be another such conference this year, but there's no money to sponsor it—about \$100,000.

"There are things the car companies and highway engineers could be doing that would make things safer not only for elderly people but for everyone," Hessburg asserts. "But we've had trouble getting traction on this."



ONE PROMISING APPROACH

OWSLEY'S WORK IS PUT TO PRACTICAL use in the department of ophthalmol-

ogy's Driving Assessment Clinic. The clinic gets referrals from physicians who suspect a patient should be evaluated and takes referrals from other health-care providers, patients or family. The clinic is run by an occupational therapist certified in driver rehabilitation. The patient gets a vision screening that includes field of vision, peripheral, contrast and processing speed (recognition) tests. Attention, memory and decision-making ability are evaluated. The therapist drives with the patient for two hours to measure on-road performance. Sometimes the answer is "Stop driving." Sometimes the answer is remediation—for instance a patient with cataracts can be advised to have surgery or give up driving. Physical impairments often can be addressed by therapy or assistance in the vehicle.

Owsley says other similar programs are found around the country, usually in association with rehabilitation centers or research hospitals.



A PATH FORWARD?

FORMER NHTSA ADMINISTRATOR Ricardo Martinez suggests that the licensing process ought to demand lifelong learning. When he took advanced driving courses, he learned he didn't know how to make the best use of antilock brakes or traction control. Any 90-year-old still at the wheel probably learned to drive on a Model A, if not a Model T. Today's cars with new driver-assisting technologies almost demand that drivers periodically update their skills in order to take advantage of the tools at their command.

If, say, retesting every driver every two to five years after age 70 makes sense, so, too, does periodic reexamination of *all* drivers. But states, under financial pressure, tend to go in the other direction, streamlining the process with mail-in or online renewals. This keeps fees coming in and mailing addresses up to date but does little to ensure that drivers are fit to control two-ton vehicles

at legal speeds up to 80 mph.

Hessburg has been a flight surgeon for local units of the National Guard and the Air Force, and he says the stringent periodic health and eye tests required of pilots might make a good model for drivers, too, suitably relaxed to match the less demanding task of driving a car versus flying a jet.

AutoWeek columnist Denise McCluggage, one octogenarian who can still school younger folks in the art of driving, says the problem drivers in her generation are the same problem drivers who've been in the next lane all her life.

"The people having accidents at 80 are the same people who had accidents in their 20s and 30s," she says. "It's not that age made them bad drivers. They were always bad drivers; they didn't pay attention, and they didn't care, and they didn't keep up with technology as it developed. Of course they crash."

If we want better drivers in their 80s, then perhaps we'd do well to train them better when they start and then demand periodic reevaluation. 🚗

WHERE TO LEARN MORE

The following web pages were among those used in researching these stories; a longer list of links is found at autoweek.com.

www.aarp.org/families/driver_safety

www.aging-parents-and-elder-care.com

www.ama-assn.org/ama/pub/category/8925.html

www.aota.org/featured/area6/docs/DriversFact.pdf

www.driver-ed.org

www.elderrage.com

www.eldersafety.org

www.eyes.uab.edu/driving

www.eyeson.org

www.medicinenet.com/script/main/art.asp?articlekey=60661

www.nhtsa.dot.gov/people/injury/olddrive

www.seniordrivers.org

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