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What Risks Do Older Drivers Pose to Traffic Safety?

A rash of tragic, highly publicized accidents caused by older drivers (65 and older) has raised fears about the risk such drivers pose to others. And, as their numbers increase, the issue will become more urgent: By 2025, drivers 65 and older will represent 25 percent of the driving population, compared with 15 percent in 2001. How great a risk do they pose compared with other drivers? Should states adopt stricter policies to protect the public from that risk?

It is not easy to answer these questions with empirical evidence. According to a new RAND Corporation study, the data on traffic accidents, their cause, and average miles traveled for different age groups are unreliable and can point researchers toward misleading conclusions. To circumvent these problems, the new study uses an innovative statistical method that relies exclusively on the Fatal Accident Reporting System, very high-quality data on all fatal crashes (rather than all accidents) in the United States since 1975.¹

Using this method, researchers identified two-car fatal crashes in the data between pairs of drivers from three age groups: younger drivers (15–24 years old), adult drivers (25–64 years old), and older drivers (65 and older). By analyzing the relative frequency with which drivers in these age groups crash into each other and their rates of fatality in such crashes, researchers could infer their relative risk, driving frequency, and physical vulnerability.

Relative Risk and Driving Frequency

The study finds that, on the whole, drivers 65 and older are just 16 percent likelier than adult drivers to cause an accident. While that difference is significant, it is much more modest than the conventional wisdom, fueled by stories of deadly incompetence, would have it. And it is nowhere near the risk posed

¹ Steven D. Levitt and Jack Porter, researchers who were estimating the risk that drunk drivers pose to the public relative to sober drivers, first developed this method (“How Dangerous Are Drinking Drivers?” *The Journal of Political Economy*, Vol. 109, No. 6, December 2001, pp. 1198–1237).

Abstract

Drivers 65 and older are 16 percent likelier than adult drivers (those 25–64 years old) to cause an accident, and they pose much less risk to the public than do drivers under 25, who are 188 percent likelier than adult drivers to cause an accident. However, older drivers are highly vulnerable to fatal injury in a crash. These findings offer little support for stricter licensing policies targeting older drivers but offer some support for policies to improve driver safety for seniors.

to the public by younger drivers. As shown in the figure, the youngest drivers are 188 percent likelier than adult drivers to cause a crash.

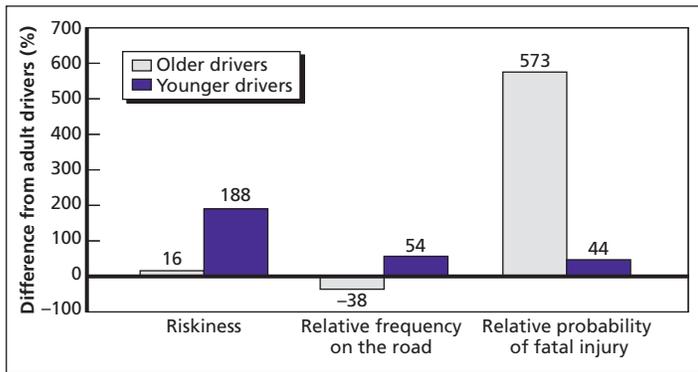
The study also finds that older drivers drive far less than adult drivers do. The second set of bars in the figure shows that, on average, older licensed drivers drive 38 percent fewer miles than other adult drivers do. Younger drivers, on the other hand, drive about 54 percent more miles per licensed driver than adult drivers do.

Together, these findings suggest that younger drivers pose a much greater risk to traffic safety than do older drivers, both because they are likelier to cause a crash and because they drive many more miles. The study finds that older drivers, who represent 15 percent of all licensed drivers, cause 7 percent of all two-car accidents (both fatal and nonfatal). Younger drivers, on the other hand, who represent 13 percent of all licensed drivers, cause 43 percent of all two-car accidents.

Relative Fragility

In the event of an accident, the study found that someone in an older driver’s car is 573 percent likelier than someone in an adult driver’s car to be killed (see figure). A fatality in a younger driver’s car, on the other hand, is 44 percent likelier than a fatality in an adult driver’s car. The

Comparison of Older and Younger Drivers in Terms of Risk, Frequency on the Road, and Fragility



finding for younger drivers is largely attributable to the fact that they are likelier to have passengers. In crashes without passengers, younger and adult drivers have very similar fatality rates, while older drivers are significantly likelier to be killed.

Self-Regulation

One of the main reasons that older drivers are not found to be significantly riskier drivers, despite medical evidence that demonstrates that their driving skill declines with age, is that they change their driving habits to compensate for their diminished competence as drivers.

This self-regulation takes several forms. First, older drivers tend to avoid driving conditions that put them at greater risk. The study finds that older drivers tend to stay off the road during peak traffic times and at night. By contrast, younger drivers show no particular pattern during the day and drive more frequently at night.

Second, many older drivers give up driving entirely, because they understand that they are a risk to others and to themselves. By removing themselves from the pool of drivers, they leave behind older drivers who drive comparatively well, thus affecting the analysis of relative risk.

The table offers evidence of this trend. It shows that the relative risk of drivers goes down as the group defined as “older” is altered from 55 and older to 70 and older: Surpris-

Changes in the Relative Riskiness of Older Drivers for Different Definitions of “Older”

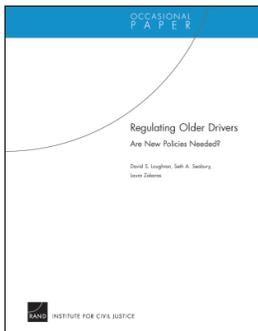
Age Minimum to Be Considered “Older” (years)	Increase Over Adult Drivers (%)	
	Relative Probability of Fatal Injury	Relative Riskiness
55	335	18
60	443	14
65	668	13
70	826	9

ingly, the oldest drivers are the least likely to cause a crash of all the four groups of older drivers—and half as likely as drivers 55 and older. In other words, the population of drivers becomes more competent with age because the worst drivers stop driving. Only the healthiest and safest older drivers remain on the road at very old ages.

Policy Implications

The study concludes that, because older drivers drive comparatively little, the risk they pose to overall traffic safety is actually much lower than that of other drivers, even though they are likelier to cause an accident when they do drive. Such results offer little support for stricter state policies. It may be that the licensing policies already in place are at least partly responsible for reducing the relative risk posed by older drivers today, but there is little empirical evidence to support this view.

Although more intensive screening would identify some older drivers whose licenses should be restricted or revoked entirely, such policies would be costly. DMVs would need to devote considerable resources to testing older drivers, and such measures could lead many capable older drivers to stop driving prematurely. More modest measures, such as requiring physicians to inform the DMV if they believe that a patient’s driving ability may be impaired, may be justified, even if relatively few traffic accidents are actually prevented as a result. However, because older drivers are so vulnerable to fatal injuries in the event of a crash, researchers suggest that policies focusing on improving the safety of automobile travel for older drivers might save more lives and impose fewer costs than would screening older drivers. ■



This research brief describes work done for the RAND Institute for Civil Justice documented in two reports: *Regulating Older Drivers: Are New Policies Needed?* by David S. Loughran, Seth A. Seabury, and Laura Zakaras, OP-189-ICJ, ISBN: 978-0-8330-4194-4 (available at http://www.rand.org/pubs/occasional_papers/OP189/), 38 pp., \$20; and *Estimating the Accident Risk of Older Drivers*, by David S. Loughran and Seth A. Seabury, TR-450-ICJ, ISBN: 978-0-8330-4139-5 (available at http://www.rand.org/pubs/technical_reports/TR450/), 64 pp., \$23. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND’s publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

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