

Dialing

A photograph showing a person's hands holding a cell phone while driving a car. The car's interior, including the steering wheel and dashboard, is visible. The image is slightly blurred, suggesting motion. The overall color palette is cool, with blues and greys.

Statistics that prove using a cell phone while driving leads to accidents are hard to come by. But several states have already outlawed their use.

Are Cell Phones a Highway Risk?

By Susan A. Ferguson

A HORRIFIC CRASH OCCURRED

on a high-speed road in suburban Washington, D.C., last February when the driver of an SUV lost control, crossed a median, and landed on top of a passenger van with four occupants. All five people were killed, and the National Transportation Safety Board says cell phone use probably was a factor along with strong winds, vehicle speed, and the driver's inexperience handling the SUV.

Responding to crashes like this one—and heeding the common-sense notion that phoning while driving must be a potential hazard—legislators in states across the country are considering whether to ban phone use by drivers. So far, only New York has taken action, becoming the first state to make it illegal to operate a vehicle while using a hand-held phone. The ban took effect in November 2001.

It's not clear how, or to what extent, the law will influence safety. So much is unknown about the crash risks associated with cell phone use, particularly whether substituting hands-free phones will reduce the risks compared with hand-held phones. Still, it's intuitive that using a phone while driving cannot be a safety plus. Anything that claims the attention of a driver is likely to be hazardous.

At issue is whether cell phones are any more hazardous than other distractions from such items as portable electronics, CD players, or route guidance systems. The phones might be getting most of the attention these days simply because everyone seems to have a mobile phone. An estimated 137 million people in the United States subscribe to cellular service. That's roughly three phone users for every five adults—and these phones are being used in cars. Fifty-four percent of the respondents to a survey conducted last year by the National Highway Traffic Safety Administration said they usually have some type of wireless phone in their vehicles. Seventy-three percent of these respondents reported using their phones at some time while driving.



Three months after the law took effect, the proportion of observed drivers using hand-held phones in New York State had dropped by about 50 percent.

So we know something about cell phone use in cars, but much still is unknown about the risks. No one knows how many crashes are related to phone use. Nor is it known whether the collisions tend to be fender benders or result in injuries or fatalities. Neither is it clear what aspect of phone use is most distracting to the driving task—whether it's primarily holding a phone, dialing it, or conversing on it. There is evidence that all three are risk factors.

The problem is the inherent difficulty of studying the effects of driver distraction. A lot of research has been conducted on simulators, test tracks, and using instrumented vehicles. The results of these studies generally suggest that drivers don't perform as well when they're attending to extraneous tasks. Opinions vary about the relative hazards associated with using hands-free cell phones. Some simulator and test track studies have reported that both hand-held and hands-free phones can significantly impair performance. Some studies suggest that the impairment from using such phones is about the same, while other research reports somewhat greater impairment from the hand-held variety.

The Need for Data

But these findings cannot necessarily be generalized to the real world. Getting real-world data that could tie crashes to phone use isn't a trivial task, although there are a few good studies. These report that phones are associated with increased crash risk. One 1997 study analyzed phone billing records for a sample of Canadian drivers in collisions, finding that crash risk was four times higher when drivers were phoning than when phones were not in use. Other studies report smaller phone-related increases in crash risk. None of the real-world studies had sufficient data on hands-free phone users to draw definitive conclusions.

There's a need for more carefully designed studies using cell phone company records, but the U.S. phone companies seem unwilling to participate. Also needed is research to examine the extent of phone use among drivers who are in crashes compared with those who aren't. It's often been suggested that if the police collected more data on drivers' use of cell phones in the

course of conducting crash investigations, we would have a better estimate of the risks associated with cell phone use. But police reports alone won't provide the answer because they give information only on drivers who crash, not on any comparison group. Besides, crash-involved drivers wouldn't be likely to give honest answers if police were to ask them if they were using a phone at the time of the collision.

Even though knowledge about the extent of risk associated with cell phone use is incomplete, legislators in many states are considering whether to ban cell phones while driving. In 2001, New York enacted the first statewide ban on hand-held phone use. This law makes it a traffic violation, punishable by a fine of \$100, for a driver to hold a cell phone to or near the ear while a vehicle is in motion, unless the driver is calling for help or reporting a dangerous situation. The law does not apply to hands-free phones. Nor does it prohibit dialing or using a hand-held phone while vehicles are stopped, such as at traffic lights.

More than 20 other states have considered similar legislation this year. Eight states have considered banning all cell phone use, and five have weighed proposals to enact general bans on distracted driving, including phone use if it's distracting.

A few other states have lesser restrictions. California, for example, requires written operating instructions for safe phone use in rental cars with cell phones. Arizona, Massachusetts, and Rhode Island prohibit cell phone use by school bus drivers while operating buses. Massachusetts requires all drivers using phones to keep at least one hand on the wheel all the time.

The absence of a specific law doesn't necessarily mean police have no recourse if they see a driver on the phone who appears to be distracted. Many states have laws against careless, negligent, or inattentive driving that could be used, depending on legal interpretation, to hold drivers using phones accountable for their actions.

An International Problem

Outside the United States, at least 25 countries prohibit or at least restrict using cell phones and other wireless technology in motor vehicles. Israel, Japan, Portugal, and Singapore prohibit

all cell phone use while driving, according to the National Conference of State Legislatures. Hand-held phone use is prohibited in the following countries: Australia, Brazil, Chile, Denmark, Germany, Greece, Hungary, Italy, Poland, the Philippines, Romania, Slovenia, South Africa, Spain, Switzerland, Turkey, and the United Arab Emirates. Similar bans are law in Hong Kong and New Delhi, India.

Drivers in the Czech Republic, France, and the Netherlands may use cell phones but can be fined if they're in a crash while phoning. In the United Kingdom, using a mobile phone while driving is listed as an example of failure to exercise proper control of the vehicle and can result in a fine.

According to the BBC, the U.K. Department of Transport "is considering a complete ban on the use of mobile phones by all drivers, even when stopped at lights or in a traffic jam."

For any law prohibiting or restricting cell phone use to improve traffic safety, there has to be compliance on the part of motorists. To address the important question of whether cell phone laws actually induce drivers to give up using their hand-held phones, the Insurance Institute for Highway Safety recently measured phone use by drivers before and after New York's law took effect. Researchers observed drivers at controlled intersections in four small to medium-size metropolitan areas in New York and two areas in Connecticut, where there was no ban on cell phone use. A few downstate counties in New York including Nassau, Suffolk, and Westchester had pre-existing bans on driving while talking on cell phones, and these counties weren't included in the surveys. About 37,000 vehicles in New York and another 21,000 vehicles in Connecticut were observed over the three separate periods when researchers were conducting their observations.

Three months after the law took effect, the proportion of observed drivers using hand-held phones in New York state had dropped by about 50 percent. In the first set of observations, conducted one month before the law took effect and before police started issuing warnings, 2.3 percent of the drivers were using hand-held phones. Shortly after the warning period ended but fines could be waived, the use rate was lower (1.1 percent). Several months later when fines no longer were waived, use was still at 1.1 percent. In neighboring Connecticut, where no law was in effect during the study period, the use of hand-held phones while driving remained steady at 2.9 percent of drivers.

Is a Ban the Answer?

Researchers also looked at whether there were differences in cell phone use by driver age and gender. Both before and after the New York law, there were no differences by gender, but there were age differences. Very few drivers judged to be 60 years or older were seen using cell phones, so this group was largely unaffected by the new law. Significant declines in cell phone use were found among drivers younger than 60.

The results of the study suggest that a ban on hand-held

phones, like the one enacted in New York, can significantly reduce hand-held phone use by drivers at least in the short term. The changes in hand-held phone use occurred at a time when the new law was getting considerable publicity. It will be interesting to see if the changes can be maintained and increased over the long term.

If in response to the law people make the switch to hands-free phones, the reductions in cell phone use will be maintained. But if the effect of the law is to encourage people to modify their phoning behavior while driving, the effects may be short-lived. In that case, the key to maintaining the reductions may be visible and well-published enforcement. This has been the case with other laws.

A question that remains is whether New York's cell phone law goes far enough. What about hands-free phones? It might be a mistake to think that safety will be served as long as drivers keep both eyes on the road and both hands on the wheel. There is evidence that talking on a hands-free phone is a significant driver distraction. However, determining the safety benefits of such a law will be difficult.

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