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A student talks on a hands-free cell phone while operating a high-tech driving simulator. The simulator was used during a University of Utah study that found motorists who talk on cell phones while driving are as impaired as drunken drivers with blood-alcohol levels at the legal limit of 0.08 percent.

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# DRIVERS ON CELL PHONES ARE AS BAD AS DRUNKS

UTAH PSYCHOLOGISTS WARN AGAINST CELL PHONE USE WHILE DRIVING

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June 29, 2006 -- Three years after the preliminary results first were presented at a scientific meeting and drew wide attention, University of Utah psychologists have published a study showing that motorists who talk on handheld or hands-free cellular phones are as impaired as drunken drivers.

"We found that people are as impaired when they drive and talk on a cell phone as they are when they drive intoxicated at the legal blood-alcohol limit" of 0.08 percent, which is the minimum level that defines illegal drunken driving in most U.S. states, says study co-author Frank Drews, an assistant professor of psychology. "If legislators really want to address driver distraction, then they should consider outlawing cell phone use while driving."

Psychology Professor David Strayer, the study's lead author, adds: "Just like you put yourself and other people at risk when you drive drunk, you put yourself and others at risk when you use a cell phone and drive. The level of impairment is very similar."

"Clearly the safest course of action is to not use a cell phone while driving," concludes the study by Strayer, Drews and Dennis Crouch, a research associate professor of pharmacology and toxicology. The study was set for publication June 29 in the summer 2006 issue of *Human Factors: The Journal of the Human Factors and Ergonomics Society*.

The study reinforced earlier research by Strayer and Drews showing that hands-free cell phones are just as distracting as handheld cell phones because the conversation itself – not just manipulation of a handheld phone – distracts drivers from road conditions.

*Human Factors* Editor Nancy J. Cooke praised the study: "Although we all have our suspicions about the dangers of cell phone use while driving, human factors research on driver safety helps us move beyond mere suspicions to scientific observations of driver behavior."

The study first gained public notice after Strayer presented preliminary results in July 2003 in Park City, Utah, during the Second International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design. It took until now for the study to be completed, undergo review by other researchers and finally be published.

## Key Findings: Different Driving Styles, Similar Impairment

Each of the study's 40 participants "drove" a PatrolSim driving simulator four times: once each while undistracted, using a handheld cell phone, using a hands-free cell phone and while intoxicated to the 0.08 percent blood-alcohol level after drinking vodka and orange juice. Participants followed a simulated pace car that braked intermittently.

Both handheld and hands-free cell phones impaired driving, with no significant difference in the degree of impairment. That "calls into question driving regulations that prohibited handheld cell phones and permit hands-free cell phones," the researchers write.

The study found that compared with undistracted drivers:

- Motorists who talked on either handheld or hands-free cell phones drove slightly slower, were 9 percent slower to hit the brakes, displayed 24 percent more variation in following distance as their attention switched between driving and conversing, were 19 percent slower to resume normal speed after braking and were more likely to crash. Three study participants rear-ended the pace car. All were talking on cell phones. None were drunk.

- Drivers drunk at the 0.08 percent blood-alcohol level drove a bit more slowly than both undistracted drivers and drivers using cell phones, yet more aggressively. They followed the pace car more closely, were twice as likely to brake only four seconds before a collision would have occurred, and hit their brakes with 23 percent more force. "Neither accident rates, nor reaction times to vehicles braking in front of the participant, nor recovery of lost speed following braking differed significantly" from undistracted drivers, the researchers write.

"Impairments associated with using a cell phone while driving can be as profound as those associated with driving while drunk," they conclude.

### **Are Drunken Drivers Really Less Accident-Prone than Cell Phone Users?**

Drews says the lack of accidents among the study's drunken drivers was surprising. He and Strayer speculate that because simulated drives were conducted during mornings, participants who got drunk were well-rested and in the "up" phase of intoxication. In reality, 80 percent of all fatal alcohol-related accidents occur between 6 p.m. and 6 a.m. when drunken drivers tend to be fatigued. Average blood-alcohol levels in those accidents are twice 0.08 percent. Forty percent of the roughly 42,000 annual U.S. traffic fatalities involve alcohol.

While none of the study's intoxicated drivers crashed, their hard, late braking is "predictive of increased accident rates over the long run," the researchers wrote.

One statistical analysis of the new and previous Utah studies showed cell phone users were 5.36 times more likely to get in an accident than undistracted drivers. Other studies have shown the risk is about the same as for drivers with a 0.08 blood-alcohol level.

Strayer says he expects criticism "suggesting that we are trivializing drunken-driving impairment, but it is anything but the case. We don't think people should drive while drunk, nor should they talk on their cell phone while driving."

Drews says he and Strayer compared the impairment of motorists using cell phones to drivers with a 0.08 percent blood-alcohol level because they wanted to determine if the risk of driving while phoning was comparable to the drunken driving risk considered unacceptable.

"This study does not mean people should start driving drunk," says Drews. "It means that driving while talking on a cell phone is as bad as or maybe worse than driving drunk, which is completely unacceptable and cannot be tolerated by society."

### **University of Utah Cell Phone Research**

Previous research by Strayer, Drews and colleagues include:

- A 2001 study showing that hands-free cell phones are just as distracting as handheld cell phones.
- A 2003 study showing that the reason is "inattention blindness," in which motorists look directly at road conditions but don't really see them because they are distracted by a cell phone conversation. And such drivers aren't aware they are impaired.
- A 2005 study suggesting that when teenagers and young adults talk on cell phones while driving, their reaction times are as slow as those of elderly drivers.

The University of Utah psychologists conducted the alcohol study because a 1997 study by other researchers evaluated the cell phone records of 699 people involved in motor vehicle accidents and found one-fourth of them had used their phone in the 10 minutes before their accident – a four-fold increase in accidents compared with undistracted motorists.

Those researchers speculated there was a comparable risk from drunken driving and cell phone use while driving. So Strayer and Drews conducted a controlled laboratory study.

The study included 25 men and 15 women ages 22 to 34 who were social drinkers (three to five drinks per week) recruited via newspaper advertisements. Two-thirds used a cell phone while driving. Each participant was paid \$100 for 10 hours in the study.

The driving simulator has a steering wheel, dashboard instruments and brake and gas pedals from a Ford Crown Victoria sedan. The driver is surrounded by three screens showing freeway scenes. Each simulated daylight freeway drive lasted 15 minutes. The pace car intermittently braked to mimic stop-and-go traffic. Drivers who fail to hit their brakes eventually rear-end the pace car. Other simulated vehicles occasionally passed in the left lane, giving the impression of steady traffic flow.

Each study participant drove the simulator during three sessions – undistracted, drunk or talking to a research assistant on a cell phone – each on a different day.

The simulator recorded driving speed, following distance, braking time and how long it would take to collide with the pace car if brakes were not used.

The study was funded by a \$25,000 grant from the Federal Aviation Administration – which is interested in impaired attention among pilots – and by Strayer’s and Drews’ salaries. The Utah Highway Patrol loaned the researchers a device to measure blood-alcohol levels.

### Driving while Distracted: A Growing Problem

The researchers cited figures from the Cellular Telecommunications Industry Association indicating that more than 100 million U.S. motorists use cell phones while driving. The National Highway Transportation Safety Administration estimates that at any given moment during daylight hours, 8 percent of all drivers are talking on a cell phone.

“Fortunately, the percentage of drunk drivers at any time is much lower,” Drews says. “So it means the risk of talking on a cell phone and driving is probably much higher than driving intoxicated because more people are talking on cell phones while driving than are driving drunk.” The main reason there are not more accidents is that “92 percent of drivers are not on a cell phone and are compensating for drivers on cell phones,” he adds.

Cell phone use is far from the only distraction for motorists. The researchers cite talking to passengers, eating, drinking, lighting cigarettes, applying makeup and listening to the radio as the “old standards” of driver distraction.

“However, over the last decade many new electronic devices have been developed, and they are making their way into the vehicle,” the researchers write. “Drivers can now surf the Internet, send and receive e-mail or faxes, communicate via a cellular device and even watch television. There is good reason to believe that some of these new multitasking activities may be substantially more distracting than the old standards because they are more cognitively engaging and because they are performed over longer periods of time.”

News media may obtain a copy of the study by emailing [leesiegel@ucomm.utah.edu](mailto:leesiegel@ucomm.utah.edu) or, starting June 29, by going to <http://hfes.org> and clicking on “What’s New”

Other studies by Strayer and colleagues on cell phones and driving may be downloaded from: <http://www.psych.utah.edu/AppliedCognitionLab/>

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**Q&As: Cellphones, texting, and driving**

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[More information on cellphones](#)[Hide all answers](#)**1 | How many people use cellphones?**

Cellphone use in the United States has grown quickly during the past decade. There were about 293 million wireless cellphone subscribers as of June 2010, according to CTIA – The Wireless Association, an industry trade group.<sup>1</sup> That's up 51 percent from 194 million in June 2005 and 3 times the 97 million wireless subscribers in June 2000. Minutes of use have surged to about 2.3 trillion in June 2010 from 195 billion in June 2000.

**2 | Do drivers frequently use phones behind the wheel?**

Yes, though it's hard to determine accurately just how many drivers use phones. Combining observational and self-reported data on phone use, the federal government estimated that drivers using phones nearly tripled during 2000-08, from 4 to 11 percent, and then declined to 9 percent in 2009. Federal observational data indicate that 5 percent of drivers in 2009 were talking on hand-held phones at any moment during the day. This means about 672,000 passenger vehicles on the road at any moment during the day were driven by people talking on hand-held phones.<sup>2</sup>

A 2009 Institute telephone survey of 1,219 drivers 18 and older indicates phone use may be somewhat lower than government estimates. Drivers on average reported spending about an hour in the car each day, with about 4 minutes of that time on the phone. This translates into roughly 7 percent of time behind the wheel on the phone.<sup>3</sup> The discrepancy between the two estimates may be a result of drivers in the Institute survey understating how much phoning while driving they do because the practice has negative connotations. It also could reflect different methodologies. Government researchers observed hand-held phone use among drivers waiting at intersections during the daytime, then adjusted this for self-reported hands-free use. The Institute's survey estimates self-reported driver phone use on all kinds of roads during all hours.

**3 | Who is most likely to talk on a cellphone while driving?**

Young drivers ages 16-24 are more likely than other drivers to talk on hand-held cellphones according to daytime observational surveys of drivers the federal government conducted nationwide in 2009. Eight percent of drivers ages 16-24 were observed talking on hand-held phones, compared with 5 percent of those ages 25-69 and 1 percent of drivers 70 and older.<sup>2</sup> In the Institute's 2009 survey of drivers' self-reported phone use, people younger than 30 spent 16 percent of driving time on the phone, compared with 7 percent for drivers 30-59 years old, and just 2.5 percent for drivers 60 and older.<sup>4</sup>

Men in the Institute's survey reported spending slightly more time on the phone than women (7 percent versus 6 percent). This differs from the government's and other observations that female drivers use cellphones more. Drivers reported using phones more on weekdays and during afternoons and evenings. Use rates were 8 percent during these times.<sup>3</sup> This is in line with government observations that use is higher on weekdays.<sup>2</sup>

**4 | Does using a cellphone while driving increase crash risk?**

Yes. Two controlled studies link talking on a cellphone directly to increased crash risk. A 2005 Institute study of drivers in Western Australia found cellphone users four times as likely to get into crashes serious enough to injure themselves.<sup>5</sup> The study used cellphone billing records to verify phone use of crash-involved drivers. Increased risk was similar for males and females, drivers younger than 30 and those 30 and older, and hands-free and hand-held phones. The findings were consistent with 1997 research that showed phone use among Canadian drivers was associated with a fourfold increase in the risk of a property damage crash. The Canadian study also used cellphone billing records to verify phone use of drivers.<sup>6</sup>

## 5 | How many crashes have been caused by drivers using cellphones?

The federal government estimates that in 2009, 5,474 people were killed and an additional 448,000 were injured in motor vehicle crashes that were reported by police to have involved distracted driving. The government estimates that 18 percent of these deaths and 5 percent of these injuries involved cellphones.<sup>7</sup> However, these estimates are imprecise and likely underestimate distraction's role in crashes, as many police reports don't have information on distracting events. Police crash reports aren't a reliable way to count cellphone-related collisions because drivers often don't volunteer that they were on the phone.

It is possible to estimate the expected number of crashes linked to phoning while driving. An Institute analysis suggests this practice could account for 22 percent of all crashes, or about 1.3 million in 2008, based on how much phoning while driving motorists admitted to researchers and the estimated risk of driver phone use.<sup>3</sup> However, there is a disconnect between estimated crashes and real-world data, which indicate that crashes have been holding steady in recent years, even as cellphone use in general and driver use of phones in particular have proliferated.

About 5.5 million police-reported motor vehicle crashes occurred during 2009, the latest year for which federal data are available. This count doesn't differ much from the approximately 6 million crashes recorded annually during the early 1990s, when cellphones started getting popular, and it is lower than the 6.4 million crashes in 2000, when federal researchers began documenting the increase in phone use while driving.

An increase in cellphone-related crashes isn't showing up in insurance claims either. An analysis by the Highway Loss Data Institute indicates that the frequency of insurance claims for crash damage filed under collision coverage during 1998-2008 hasn't increased, even though driver phone use has escalated.<sup>8</sup>

A 2006 Virginia Tech Transportation Institute study used video cameras to monitor drivers in about 100 vehicles for about a year. Four percent of crashes or near-crashes were attributable to talking on a cellphone, researchers estimated.<sup>9</sup>

## 6 | Are hands-free cellphones safer?

No, at least not after the conversation begins. Two studies of crashes using cellphone billing records to verify phone use found about a fourfold increase in crash risk with conversing on both hands-free and hand-held phones.<sup>5,6</sup> The studies were unable to estimate crash risk from different types of hands-free devices. They also were unable to determine whether there was any benefit associated with hands-free devices while placing the call. Experimental research using driving simulators indicates that phone conversation tasks, whether using hand-held or hands-free devices, affect some measures of driving performance.<sup>10,11</sup> Hands-free phones may eliminate some of the physical distraction of handling phones, but the cognitive distraction from phone conversations remains.

## 7 | How does cellphone use affect driving performance?

An Institute review of more than 120 cellphone studies, about half of which were experimental studies using driving simulators or vehicles instrumented with video cameras, sensors, and other equipment, found that nearly all reported that some measures of driver performance were affected by the cognitive distractions associated with cellphone tasks.<sup>11</sup> Phone conversation tasks typically increased reaction times and travel speeds and increased lane deviations and steering wheel movements. Statistical analyses that aggregated the results of 33 studies and 23 studies, respectively, reported similar findings.<sup>10,12</sup> Some studies have found that older drivers' performance is more affected by cellphone tasks, particularly their reaction time. Few studies included drivers younger than 18, and evidence is mixed on the effects of phone use for teenage drivers compared with adult drivers. Findings also are mixed on whether driving performance while talking on a cellphone improves with practice. Some simulator studies suggest that the negative impact of phone use on driving performance may lessen with experience.<sup>13,14</sup> Other simulator research has found no change in performance with practice.<sup>15</sup>

Using functional magnetic resonance imaging, researchers at Carnegie Mellon University found a 37 percent reduction in brain activity associated with driving when research subjects listened via a headset to spoken sentences that they judged as true or false while steering in a driving simulator. Researchers concluded that listening and processing information from a phone conversation can draw mental

resources away from driving, worsening driving performance, even when drivers are not holding or dialing a phone.<sup>16</sup>

Further evidence comes from a few studies of small samples of people observed during their everyday driving. One study included drivers of 100 vehicles instrumented with video cameras and other monitoring technologies. Only a few serious crashes occurred, but researchers calculated the odds of being in a near-crash or crash were 2.8 times higher when dialing a hand-held phone than when phones weren't being used. The odds of a near-crash or crash were 1.3 times higher when talking on a hand-held phone, although this was not statistically significant. But because drivers spend more time talking on a hand-held phone than dialing, the percentage of crashes and near-crashes estimated to be attributable to talking and dialing on hand-held phones were both about 4 percent.<sup>9</sup>

#### 8 | Do bans on hand-held phones work to reduce driver phone use?

Institute research has documented that all-driver bans on hand-held phoning can have large and lasting effects on phone use. In November 2001, New York became the first state to implement a universal ban on hand-held cellphones. Observed driver hand-held cellphone use declined by an estimated 47 percent immediately after the ban. Use then began going back up, but when measured more than 7 years after the ban, use was 24 percent lower than would have been expected without the ban. Soon after a ban was passed in the District of Columbia in 2004, observed driver hand-held phone use dropped by 41 percent. Nearly five years after the ban, the rate of phone use was 43 percent lower than would have been expected without a ban. Connecticut's ban took effect in 2005. Observed hand-held phone use declined an estimated 76 percent immediately after a ban; more than 3 years later, use was 65 percent lower than would be expected without a ban.<sup>17</sup>

In the Institute's telephone survey of cellphone use, drivers in states with hand-held bans were less likely to say they talk on phones while driving. Forty-four percent of drivers in states with bans reported they don't use phones when driving, compared with 30 percent in states without such laws. The percent of drivers who talk on phones and always talk hands-free was 22 in states with all-driver bans on hand-held phones, and 13 in states without all-driver bans.<sup>4</sup>

#### 9 | Do hand-held phone bans reduce crashes?

There is no evidence so far that banning hand-held phone use reduces crashes, even though Institute research demonstrates that bans on hand-held phoning while driving can have big and long-term effects in curbing phone use. A 2009 analysis by the Highway Loss Data Institute found that hand-held bans had no effect on insurance claims. Researchers compared claims for crash damage in 4 jurisdictions before and after hand-held phone use bans, finding steady claim rates before and after laws went into effect.<sup>8</sup>

Many drivers still use hand-held phones where use is banned, and others may simply switch to hands-free phones. Given that crash risk increases substantially with drivers' use of either hand-held or hands-free phones, bans on hand-held cellphones won't eliminate the problem entirely. Laws prohibiting hands-free phones are difficult to enforce, plus drivers may be unfamiliar with restrictions in their state. In the Institute telephone survey, 18 percent of drivers in states with a universal ban on hand-held phone use either believed there was no law or were unsure. The proportion was even higher (48 percent) among drivers in states with a universal texting ban. Many drivers don't believe police pay much attention to them. Only 29 percent of drivers in states with universal hand-held phone bans who knew about the bans and 22 percent of drivers in states with universal texting bans who were aware of the restrictions felt they were strongly enforced.<sup>4</sup>

#### 10 | How common are bans on hand-held cellphones and texting?

Bans are widespread in other countries and are becoming more common in the U.S. Nine states (California, Connecticut, Delaware, Maryland, New Jersey, New York, Oregon, Utah, and Washington) and the District of Columbia have enacted laws that ban drivers of all ages from using hand-held cellphones.

More common in the US are laws that restrict young drivers from using any type of cellphone. Teenage drivers in 28 states and the District of Columbia have such laws. School bus drivers in 19 states and the District of Columbia are restricted from using all cellphones while driving a bus.

In Australia, drivers in Victoria and Tasmania are banned from using all phones, except ones secured in a commercially designed holder fixed to the vehicle that can be operated without touching any part of the phone.

Text messaging is banned for all drivers in 30 states and the District of Columbia. In addition, novice drivers are banned from texting in 8 states (Alabama, Indiana, Maine, Mississippi, Missouri, Oklahoma, Texas, and West Virginia), and school bus drivers are banned from text messaging in 2 states (Oklahoma and Texas).

Cellphone laws in the US

#### 11 | Why do more laws cover only teenage drivers?

Cellphone bans for young drivers are becoming more common amid concerns about the role distractions play in teenagers' elevated crash risk. Distractions of any type are a common factor in crashes of newly licensed 16-year-old drivers.<sup>18</sup> Some research also shows teenage drivers tend to use cellphones and other emerging technologies more than adult drivers.<sup>19</sup> States increasingly have graduated licensing laws that place restrictions on newly licensed drivers, e.g., limiting nighttime driving and the number of passengers a novice driver can carry. Cellphone bans are being added to those restrictions.

See Q&A: Teenagers — graduated driver licensing

More about the licensing law in your state, or any state

#### 12 | Do teenagers comply with cellphone bans?

Young drivers often ignore cellphone restrictions, according to an Institute study of North Carolina's cellphone ban for young beginning drivers. The state bans the use of any telecommunications device by drivers younger than 18 under its graduated licensing system. Observed cellphone use by teenagers leaving high schools in the afternoon changed little from 1-2 months before to 5 months after the restriction took effect on Dec. 1, 2006.<sup>20</sup> About 11 percent of teenage drivers were seen using phones before the law. That percentage rose slightly to 12 percent in the postlaw survey. Cellphone use remained steady at about 13 percent at comparison sites in South Carolina, which doesn't restrict teenage drivers' phone use. When observed postlaw, less than 1 percent of teenage drivers in North Carolina were using hands-free phones. About 2 percent were observed dialing or texting and about 9 percent were holding a phone to their ear.

The study coupled driver observations with telephone surveys of North Carolina parents and their teenagers. In postlaw surveys, about two-thirds of teenagers said they knew about their state's law, compared with 39 percent of parents. Three-quarters of teenagers and 95 percent of parents said they approved of the law. The proportion of teenagers who reported using phones while driving declined somewhat following the law. However, of those who owned a phone and admitted to ever talking on the phone while driving, about half admitted they used their phones, if they had driven, on the day prior to the interview. There was no evidence of focused enforcement or publicity of the law. Only 22 percent of teenagers and 13 percent of parents believed the ban was being enforced fairly often or a lot.<sup>20</sup>

#### 13 | Is cellphone use more distracting to drivers than other tasks?

Evidence is mixed. For example, some experimental studies found that phone conversations are more disruptive than conversations with passengers or adjusting a radio.<sup>11</sup> However, two statistical analyses combining the results of multiple experimental studies found similar decrements in reaction time for conversation tasks with passengers and with hand-held or hands-free phones.<sup>10,12</sup> Two studies reported that talking on cellphones or having a 0.08 percent blood alcohol concentration (BAC) — the legal threshold for impairment — has a comparable effect on some simulated driving tasks.<sup>21,22</sup> However, the risks associated with alcohol impairment accumulate over the entire duration of a trip, whereas the risks of cellphone use generally apply for only a portion of a trip. In addition, crash risk increases substantially at very high BACs, and the implications of the experimental studies for drivers in their own vehicles is unknown.

#### 14 | Is texting while driving a problem?

Texting in general is on the increase. Annualized text messages soared to about 1.8 trillion in June 2010 from 57 billion in June 2005.<sup>1</sup> Many people report that they text while driving. A 2009 Institute survey found that 13 percent of drivers of all ages have texted while driving, and this jumps to 43 percent among 18-24-year-old drivers.<sup>4</sup> Similar results were found in other studies.<sup>23,24</sup>

There hasn't been a lot of research on the safety effects of texting and driving, but three studies of young drivers using driving simulators all found that receiving, and especially sending, text messages impeded drivers' reaction times and lane-keeping ability.<sup>25,26,27</sup> In a study involving large trucks instrumented with video cameras and other monitoring technology, the odds of a traffic conflict, lane drift, near-crash, or crash were 23 times higher when a truck driver was texting. A limitation is that less than 1 percent of the incidents involved crashes; most were lane drifts or other driver errors. It's unknown how such incidents relate to actual crashes. It also is unclear whether the results generalize to passenger vehicle drivers.<sup>28</sup>

#### 15 | Do drivers comply with text messaging bans?

So far it appears that drivers, especially young adults, largely shrug off texting bans. An Institute study found that among 18-24 year-olds — the group most likely to text — 45 percent reported texting while driving in states that bar the practice, just shy of the 48 percent of drivers who reported texting in states without bans.<sup>4</sup> Among drivers 25-29, 40 percent reported texting in states with bans, compared with 55 percent in states without bans.

Many drivers are unclear about the laws in their state. Forty-eight percent of drivers in states with universal texting bans believed there was no law or were unsure. Plus, only 22 percent of drivers who were aware of the restrictions felt they were strongly enforced.<sup>4</sup>

#### 16 | Do bans on driver text messaging reduce crashes?

Not according to research by the Highway Loss Data Institute. A 2010 study examined insurance claims filed for damage to vehicles before and after driver texting bans were enacted in four states. There was no reduction in claim rates relative to comparison states. Rather, there was a significant increase of 7-9 percent in the frequency of claims in 3 of the 4 study states. Increases in the frequency of claims also were found for rated drivers 25 and younger in these 3 states.<sup>29</sup>

#### 17 | Can technology be used to prevent crashes caused by distracted driving?

Automakers are rolling out crash avoidance systems that warn drivers when they are not paying attention. Some systems may intervene if the system judges that a crash is imminent. Systems like lane-departure warning and forward-collision warning promise to prevent many kinds of distracted driving crashes, not just those that result from cellphone use (see *Status Report*, April 17, 2008). But this isn't a quick fix. Most new vehicles don't have crash avoidance features, and it will take some time before the systems are in wide use as newer vehicles supplant older ones. Plus, the effects of these technologies on real-world crashes have not yet been established.

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# INSURANCE INSTITUTE FOR HIGHWAY SAFETY

## NEWS RELEASE

July 12, 2005

### **1ST EVIDENCE OF EFFECTS OF CELL PHONE USE ON INJURY CRASHES: CRASH RISK IS FOUR TIMES HIGHER WHEN DRIVER IS USING A HAND-HELD CELL PHONE**

ARLINGTON, VA — Common sense as well as experience tell us that handling and dialing cell phones while driving compromise safety, and evidence is accumulating that phone conversations also increase crash risk. New Institute research quantifies the added risk — drivers using phones are four times as likely to get into crashes serious enough to injure themselves. The increased risk was estimated by comparing phone use within 10 minutes before an actual crash occurred with use by the same driver during the prior week. Subjects were drivers treated in hospital emergency rooms for injuries suffered in crashes from April 2002 to July 2004.

The study, "Role of cellular phones in motor vehicle crashes resulting in hospital attendance" by S. McEvoy et al. is published in the *British Medical Journal*, available at [bmj.com](http://bmj.com).

"The main finding of a fourfold increase in injury crash risk was consistent across groups of drivers," says Anne McCartt, Institute vice president for research and an author of the study. "Male and female drivers experienced about the same increase in risk from using a phone. So did drivers older and younger than 30 and drivers using hand-held and hands-free phones."

Weather wasn't a factor in the crashes, almost 75 percent of which occurred in clear conditions. Eighty-nine percent of the crashes involved other vehicles. More than half of the injured drivers reported that their crashes occurred within 10 minutes of the start of the trip.

— MORE —

The study was conducted in the Western Australian city of Perth. The Institute first tried to conduct this research in the United States, but U.S. phone companies were unwilling to make customers' billing records available, even with permission from the drivers. Phone records could be obtained in Australia, and the researchers got a high rate of cooperation among drivers who had been in crashes.

Another reason for conducting the study in Australia was to estimate crash risk in a jurisdiction where hand-held phone use is banned. It has been illegal while driving in Western Australia since July 2001. Still one-third of the drivers said their calls had been placed on hand-held phones.

**Hands-free versus hand-held:** The results suggest that banning hand-held phone use won't necessarily enhance safety if drivers simply switch to hands-free phones. Injury crash risk didn't differ from one type of reported phone use to the other.

"This isn't intuitive. You'd think using a hands-free phone would be less distracting, so it wouldn't increase crash risk as much as using a hand-held phone. But we found that either phone type increased the risk," McCartt says. "This could be because the so-called hands-free phones that are in common use today aren't really hands-free. We didn't have sufficient data to compare the different types of hands-free phones, such as those that are fully voice activated."

**Evidence of risk is mounting:** The findings of the Institute study, based on the experience of about 500 drivers, are consistent with 1997 research that showed phone use was associated with a fourfold increase in the risk of a property damage crash. This Canadian study also used cell phone billing records to establish the increase in risk. The Institute's new study is the second to use phone records and the first to estimate whether and how much phone use increases the risk of an injury crash.

Taken together, the two studies confirm that the distractions associated with phone use contribute significantly to crashes. Other studies have been published about cell phone use while driving, but most have been small-scale and have involved simulated or instrumented driving, not the actual experience of drivers on the road. When researchers have tried to assess the effects of phone use on real-world crashes, they usually have relied on police reports for information. But such reports aren't reliable because, without witnesses, police cannot determine whether a crash-involved driver was using a phone.

End of 3-page news release on cell phone risk while driving  
**For more information go to [www.iihs.org](http://www.iihs.org)**



## State considers cell phone ban

### Bill would prohibit virtually all phone use for all Alaska drivers

Sunday, February 07, 2010

Story last updated at 2/7/2010 - 5:02 am

State considers cell phone ban  
Bill would prohibit virtually all phone use for all Alaska drivers

By Jeremy Hsieh | The Associated Press

Lawmakers in the nation's most inaccessible state capital are considering the most aggressive statewide ban in the United States on the use of cell phones while driving.

Six states and Washington, D.C., ban handheld cell phone use while driving and 21 states and D.C. ban all cell phone use for novice drivers, according to the Governors Highway Safety Association. But the bill sponsored by Alaska state Rep. Mike Doogan, D-Anchorage, would ban virtually all cell phone use for all drivers.

"We haven't endorsed that approach as an association, but it's clearly where the debate is going," said Jonathan Adkins, a spokesman for the Governors Safety group based in D.C. "The hang up is convincing the public. It's probably too bold of a step for some people."

Doogan introduced his stringent bill this year after Rep. Berta Gardner, a fellow Anchorage Democrat, proposed specifically banning use of cell phones by drivers under 18. Both bills would make driving while using a cell phone an infraction punishable by a fine of up to \$300 and points toward suspension or revocation of a driver's license.

It would be a primary offense under Doogan's version, meaning law enforcement could make a stop and ticket a driver specifically to enforce the rule. Gardner's version makes it a secondary offense, meaning some other violation must trigger the stop.

The only exception in Doogan's bill is for emergency calls. Neither bill makes exceptions for handsfree cell phone use. Both sponsors cite research that indicates the main risk comes from the brain drain that comes with the act of communicating, rather than the physical act of holding a phone. A study from the University of Utah found that cell phone use, whether handheld or handsfree, can cause driver reaction delays comparable to the legal limit of alcohol.

Out of 78,145 traffic accidents in Alaska from 2002 to 2007, 335 - less than half a percent - were cell phone-related, according to state Department of Transportation and Public Facilities spokesman Roger Wetherell. More than a third of the cell phone-related accidents are attributable to drivers age 16 to 20.

Amber Burton, 22, of Valdez, said it's natural for her to answer her phone while she drives.

"I think I have more issues with changing a CD or picking up something that dropped than using

a phone," she said.

She only has a 3-mile commute to work ("Everything's relatively close in Valdez," she says) but thinks a ban is a good idea.

"I probably would feel safer. Even though I'm probably one of those people" that scares other drivers, she said. "Just because I'm comfortable with it, doesn't mean everyone else is."

Part of Rick Burchell's job as a partner and instructor of AA Drivers Educational School Inc. in Anchorage is teaching his students to watch out for distracted drivers, especially cell phone users.

National cell phone-specific accident data is unavailable, though the ratio of "distracted drivers" in fatal crashes is on the rise, from 8 percent in 2004 to 11 percent in 2008, according to data compiled by the National Highway Traffic Safety Administration.

Meanwhile, an insurance industry study released Friday by the Highway Loss Data Institute found that state laws banning the use of handheld devices to make calls or send text messages while driving have not resulted in fewer vehicle crashes. It examined insurance claims from crashes before and after such bans took effect in California, New York, Connecticut and Washington, D.C.

Driving instructor Burchell sees merit in both bills, but admits he's slightly off-task when he's driving because of his own phone use, albeit through a handsfree system. Part of Burchell's rationale for limiting the risk through a handsfree system rather than abstaining entirely stems from parallels he sees with the safety fight decades ago against radios in cars. Like cell phones, radios introduced new distractions, but neither technology is going away, he said.

When Burchell's son, now 18, got his license, Burchell made him agree to never answer his phone behind the wheel.

"And then - all the kids think this is really despicable - dad made calls to the cell phone to make sure he wasn't answering," Burchell said. "He knew that his automobile would be lost forever if he picked up the phone."

Gardner said she'd like a ban for all drivers, but that the teens approach would meet less opposition. However, Gardner doesn't expect a hearing to be scheduled in the House Finance Committee, where her bill has sat since March despite a zero budget-impact statement from the Department of Public Safety.

"For all intents and purposes, the bill is dead," Gardner said.

That hasn't discouraged Doogan.

"I don't worry about that," he said, noting co-sponsor Peggy Wilson's role as chair of the House Transportation Committee, where his bill is awaiting a hearing date. Wilson is a Republican from Wrangell.

Key lawmakers in gatekeeper roles beyond Wilson's committee have declined to comment or said they don't know what the prospects are for Doogan's bill.

Alaska's big three cell phone service providers have different views on the proposal. AT&T supports restricting phone use by teen drivers, except in emergencies, said spokesman Kerry Hibbs. It recently launched an education campaign on the dangers of texting while driving.

Alaska Communications Systems advocates for laws requiring drivers to use handsfree devices, said spokeswoman Heather Cavanaugh.

And General Communication Inc., Alaska's largest telecommunications company, is neutral on the bills, but is generally opposed to legislation that curbs customer choice on handsets, said spokesman Curtiss Clifton.

The effort follows a state ban on drivers texting and watching videos that took effect in 2008 and a national ban on texting for truck and bus drivers that took effect Jan. 26.