

STATUS

SPECIAL ISSUE: PHONING WHILE DRIVING

REPORT

INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

Vol. 45, No. 2, Feb. 27, 2010



Sometimes research findings fit together to produce a coherent set of knowledge, but other times they

DON'T FIT AT ALL.

This doesn't necessarily mean any of the findings are wrong. It might be a matter of uncovering new information to solve the puzzle so the pieces fit together. This is the case when it comes to the hot-button topic of

PHONING WHILE DRIVING,

a risky practice that has increased dramatically. A new survey (see p. 2) indicates drivers use their phones not only on the open road but also in stop-and-go traffic. A quarter say they phone in fast, heavy traffic. Based on how much phoning while driving motorists admitted to surveyors and the estimated risk of driver phone use, an Institute analysis suggests this practice could account for 22 percent of all crashes, or about 1.3 million in 2008.

These *(continues on p. 4)*

DRIVERS PHONE AND TEXT EVEN AT RISKIEST TIMES

Cruise any road and chances are good you'll see drivers gabbing on hand-held cellphones or thumbing text messages. Are motorists really doing as much electronic multitasking as it seems? The short answer is yes, no matter traffic conditions or weather, a new Institute survey indicates. Another key finding is that drivers don't talk on cellphones as much in states where hand-held phones are outlawed, but they largely ignore bans on texting.

The Institute surveyed 1,219 drivers 18 and older during the last 2 months of 2009 by landline phone or cellphone, asking questions about how much time they talk and text, when and where they use phones, and if they use hands-free or hand-held ones. Researchers also tried to gauge awareness of bans on using hand-held phones and texting.

"Some drivers self-limit phone use by pulling off the road to make or take calls and avoiding phoning when they are in heavy traffic or bad weather," says Anne McCartt, Institute senior vice president for research and an author of the new study. "Most of the drivers told us that they use phones in clear weather. What is surprising is how many drivers reported that they have used cellphones in risky situations."

Overall, 40 percent of drivers reported talking on phones at least a few times per week, and 19 percent talk daily. Thirty-five percent said they never phone while driving. On average drivers said they spent 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, which is much lower than the federal government's latest estimate of 11 percent, based on self-reports and roadside observations (see chart p.4).

"People tend not to fess up to behavior that has a negative image, so drivers in our survey may have understated how often they talk on the phone," McCartt says. "It's worth noting, too, that government re-

searchers observed drivers waiting at intersections during the daytime, while our survey estimates driver phone use on all kinds of roads during all hours."

Cellphone use proliferates: There were more than 276 million wireless phone subscribers as of June 2009, according to the Cellular Telecommunications and Internet Association. That's up 42 percent from 194 million in June 2005. Texting is becoming more popular, too. More than 600 billion text messages were sent in 2008, up nearly 4 times from 2006, the association says.

In the Institute survey, drivers reported using phones more on weekdays and during afternoons and evenings. Use rates were 8 percent during these times.

"It makes sense that there's more phoning on weekday afternoons and evenings," McCartt says. "Right after work or school people want to connect with friends and family, and lots of drivers do that once they're in the car."

Men in the survey reported spending slightly more time on the phone than women (7 percent versus 6 percent). This differs from the government's observation that women drivers use cellphones more.

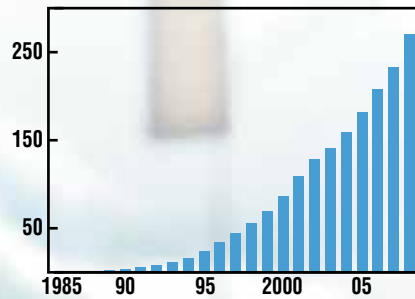
Young drivers phone and text: Younger drivers were more likely to say they use phones than older people. Drivers younger than 30 spent 16 percent of driving time on the phone, compared with 7 percent for drivers 30-59 years old, and just 2.5 percent for drivers 60 and older.

Texting is more common among younger drivers, the survey found. Contrary to popular perceptions, though, the habit isn't entrenched — yet. Drivers who said they text, email, or use the internet or other applications make up a small percentage in the survey. Texting was the most common, with 13 percent of drivers reporting some texting while driving. Thirty-seven percent of drivers 18 to 24 years old said they text at least a few times a month compared with less than 1 percent of drivers 60 and older.

"The 18-24 year-old set is the most plugged-in generation, and the ranks of texting drivers likely will grow as today's tweens and teens get their licenses," McCartt notes.



CELLPHONE SUBSCRIBERS, IN MILLIONS, 1985-2009



Source: Cellular Telecommunications and Internet Association

DISTRIBUTION OF HOW OFTEN DRIVERS TALK ON CELLPHONES WHILE DRIVING

	States with hand-held bans	States without hand-held bans
Daily	13%	22%
Few times per week	17%	22%
Few times per month	12%	12%
Less than once per month	14%	13%
Never	44%	30%

DISTRIBUTION OF HOW OFTEN DRIVERS USE HANDS-FREE VS. HAND-HELD CELLPHONES

	States with hand-held bans	States without hand-held bans
Only talk hands-free	22%	13%
Sometimes talk hands-free	15%	17%
Only talk hand-held	19%	40%
Never talk while driving	44%	30%

PERCENT OF DRIVERS WHO TEXT, BY AGE AND PRESENCE OF STATE TEXTING BAN

	States with all-driver texting bans	States without texting bans
18-24 years old	45%	48%
25-29 years old	40%	55%
30-59 years old	12%	12%
60 years and older	0%	1%

Phoning in risky situations: Fender-benders frequently happen in stop-and-go traffic, taxing any driver's concentration. No matter. People still pick up the phone. Forty-two percent of drivers surveyed said they used phones when traffic was stop and go, just shy of the 45 percent who used them in free-flowing traffic on high-speed roads, presumably when driving requires less concentration. Even in heavy, fast traffic a quarter of drivers said they have talked on phones.

Bad weather deters some motorists from using phones but not all. Twenty-nine percent of drivers surveyed reported talking on the phone on snowy or wet roads, compared with 61 percent who said they have used phones in clear weather.

Fifty-three percent of drivers surveyed reported using cellphones on trips of more than an hour. Fifty-one percent said they talked at intersections, and 45 percent used cellphones at night.

Business calls aren't taking up most of the airtime, the survey found. Only 20 percent of people who talk on phones while driving reported that more than half of their calls are work-related. A third of men reported mostly business calls compared with 8 percent of women.

Reducing phone use: Hand-held bans appear to dissuade some drivers from using phones at all. 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.

Seven states and the District of Columbia restrict hand-held phones for all drivers, but no state bans hands-free phones for all drivers. Nineteen states and DC ban all drivers from texting (see www.iihs.org/laws/CellPhoneLaws.aspx).

Hand-helds are the norm, and they are frequently used even in states that ban all drivers from using them. Thirty-four percent of drivers in states with hand-held bans for all drivers report using these phones (*continues on p.7*)

(continued from p. 1) numbers are so big that they would be expected to produce an increase in the total number of crashes, and the conundrum is that there's no such increase. Data from several sources reveal that crashes have been holding steady in recent years, even as cellphone use in general and driver use of phones in particular have proliferated.

"Don't take this to mean that phoning while driving isn't risky," cautions Institute president Adrian Lund. "It is. We just don't know yet why the risk isn't showing up in higher crash rates."

Crash patterns in federal data: Based on data from the federal Fatality Analysis Reporting System and General Estimates System, a total of about 5.8 million police-reported motor vehicle crashes occurred during 2008, the latest year for which 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, or from the 6.4 million crashes in 2000, when federal researchers began documenting the increase in phone use while driving.

Federal estimates of drivers using phones nearly tripled during 2000-08, from 4 to 11 percent. (The Institute's new survey pegs phone use at 7 percent, but this could be due to under-reporting). Yet crashes didn't rise during these years. In fact, federal data indicate a slight decline.

Of course, the number of crashes over time is subject to multiple influences besides the increasing proportion of drivers using cellphones, and some of these other influences are likely to offset any increase in collisions associated with phone use. In particular, crashes are known to fluctuate along with economic conditions, and the struggling US economy during recent years would be expected to suppress both miles driven and the number of crashes.

"Still the increase in driver phone use is so dramatic and the risk associated with it is so substantial that we expected to see an uptick in total crashes, but we haven't," Lund points out.

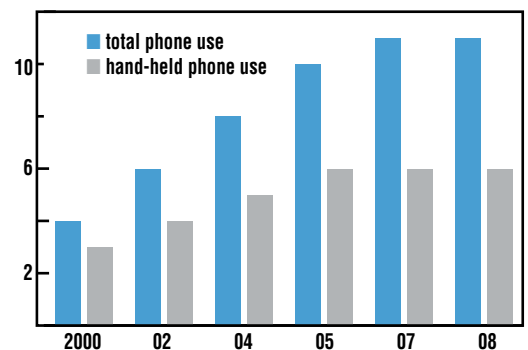
Insurance data show similar patterns: Another source of information on crash trends is the Highway Loss Data Institute, which collects and analyzes insurance claims and coverage information. This group, affiliated with the Insurance Institute for Highway Safety, reports no increase in the frequency of insurance claims for crash damage filed under collision coverage during 1998-2008, as driver phone use escalated.

Yet numerous studies establish a definite increase in crash risk associated with phone use (see *Status Report*, Oct. 13, 2009; on the web at ihs.org). For example, 2 studies that examined the cellphone billing records of crash-involved drivers peg the increase at 4-fold. That is, the risk of a crash involving injury or property damage is 4 times higher during a phone conversation.

It doesn't matter whether a driver uses a phone that is hand-held or hands-free because the estimated risk is about the same, regardless of phone

Note about the charts: The source for the bar chart on this page and the one labeled "All crashes" on the facing page is the National Highway Traffic Safety Administration. The percent of drivers using hand-held phones (below) is observed while total phone use is estimated. The "All crashes" chart combines data from the Fatality Analysis Reporting System, a census of fatal crashes on US roads, and the General Estimates System, a nationally representative sample of all police-reported crashes. The collision claim frequencies (facing page) during 1998-2008 are from the Highway Loss Data Institute.

PERCENT OF DRIVERS TALKING ON PHONES





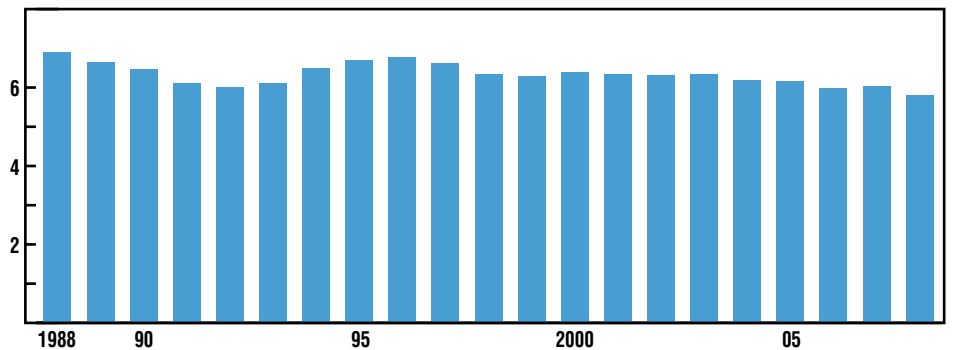
type (see *Status Report*, July 16, 2005; on the web at iihs.org). The risk also is about the same for men and women and for motorists young and old.

One reason the trends in phone use and crashes are out of sync may be that phoning isn't a unique risk. It is distracting, but then again drivers always have been distracted by eating, fiddling with radios, tending to children, and so on. These distractions could be just as risky as phoning.

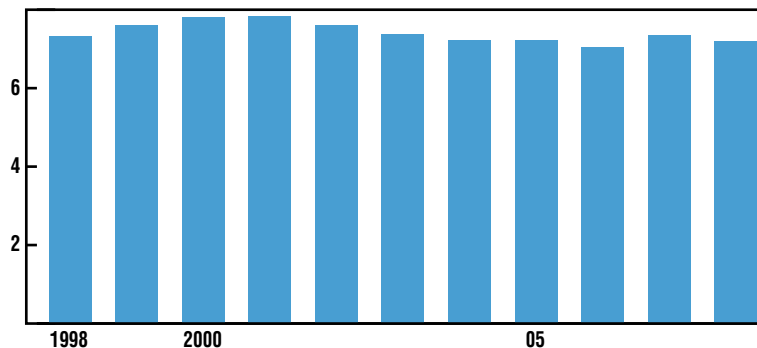
"If so, then laws banning driver phone use won't have much effect on safety. They might curb phoning among drivers, but any benefit of this might be offset by driver engagement in other distractions," Lund says.

Technology to block driver cellphone use might work to reduce phoning while driving (see p. 7), but the safety payoff is unknown. Crash avoidance features like lane departure warning and forward collision warning seem more promising (see *Status Report*, April 17, 2008; on the web at iihs.org). These address all kinds of distractions, not just cellphones, by bringing drivers' attention back to the road.

ALL POLICE-REPORTED CRASHES, IN MILLIONS, BY YEAR



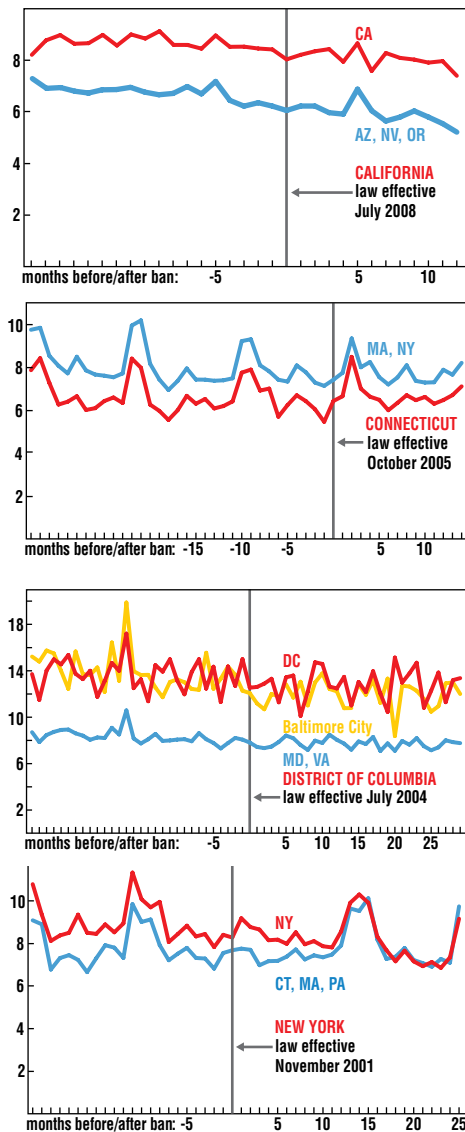
COLLISION CLAIMS PER 100 INSURED VEHICLE YEARS, BY CALENDAR YEAR, 4 MOST RECENT MODEL YEARS



PHONE USE BANS AREN'T PRODUCING EXPECTED BENEFIT

Driver use of hand-held phones already is illegal in 8 US jurisdictions, and these laws are proving successful in reducing proportions of drivers using such phones (see *Status Report*, Oct. 13, 2009; on the web at ihs.org). A new Institute survey also confirms that fewer people are phoning while driving in states with bans, and some have switched to hands-free cellphones (see p.2). Given

COLLISION CLAIMS PER 100 VEHICLE YRS. FOR NEW VEHICLES, BEFORE AND AFTER HAND-HELD PHONE USE LAWS



the established risk associated with phoning while driving, banning hand-held use would be expected to reduce crashes. But so far it hasn't. Crashes aren't declining. This is the major finding of a new study comparing insurance claims for crash damage in 4 jurisdictions before and after hand-held phone use bans.

Highway Loss Data Institute (HLDI) researchers found steady claim rates before and after the bans. Month-to-month fluctuations in rates of collision claims in jurisdictions with bans didn't change. Nor did the patterns change in comparison with trends in jurisdictions that didn't have such laws.

Specifically, the researchers calculated monthly collision claims per 100 insured vehicle years (a vehicle year is 1 car insured for 1 year, 2 insured for 6 months each, etc.) for vehicles up to 3 years old during the months immediately before and after hand-held phone use was banned while driving in New York (November 2001), the District of Columbia (July 2004), Connecticut (October 2005), and California (July 2008).

The other 4 US jurisdictions where driver use of hand-held phones is banned are New Jersey, Oregon, Utah, and Washington. Data were collected not only in the 4 study jurisdictions but also in nearby jurisdictions without the bans. This method controlled for possible changes in collision claim rates unrelated to the bans — changes in miles driven because of the economy, seasonal changes in driving patterns, etc.

"The laws aren't reducing crashes, even though we know that such laws have reduced hand-held phone use, and several studies have established that phoning while driving increases crash risk," says Adrian Lund, president of both the Insurance Institute for Highway Safety and HLDI.

The HLDI database doesn't identify drivers using cellphones when their crashes occur. However, reductions in observed phone use following bans are so substantial and estimated effects of phone use on crash risk are so large that reductions in aggregate crashes would be expected. In New York HLDI researchers did find a decrease in col-

lision claim frequencies, relative to comparison states, but this decreasing trend began well before the state's ban on hand-held phoning while driving and actually paused briefly when the ban took effect. Trends in the District of Columbia, Connecticut, and California didn't change.

"So the new findings don't match what we already know about the risk of phoning and texting while driving," Lund points out. "If crash risk increases with phone use and fewer drivers use hand-held phones where it's illegal to do so, we would expect to see a decrease in crashes. But we aren't seeing it. Nor do we see collision claim increases before the phone bans took effect."

HLDI researchers compared the District of Columbia's collision claim frequency trend not only with statewide trends in Virginia and Maryland but also with the nearby city of Baltimore's trend. Again, the finding is no difference in the pattern of collision claims. Nor were any differences apparent when HLDI researchers applied a time-based regression model to insurance claims data for each of the study and comparison jurisdictions.

Lund points to factors that might be eroding the effects of hand-held phone bans on crashes. One is that drivers in jurisdictions with such bans may be switching to hands-free phones. In states with all-driver bans on using hand-held cellphones, 22 percent of drivers the Institute surveyed reported using cellphones and always talking hands-free. In this case crashes wouldn't go down because the risk is about the same, regardless of whether a phone is hand-held or hands-free.

No US jurisdiction bans all drivers from using hands-free phones. Twenty-one states and the District of Columbia do prohibit beginning drivers from using any type of phone, including hands-free, but such laws are difficult to enforce. This was the finding in North Carolina, where teen drivers didn't curtail phone use in response to a ban, in part because they didn't think the law was being enforced (see *Status Report*, June 9, 2008; on the web at ihs.org).

(continued from p.3) some or all of the time, compared with 57 percent in states without such restrictions.

People who spend a lot of time talking behind the wheel are more likely to go hands-free, the survey found. Thirty percent of drivers who said they use their phones every day when driving reported using hands-free phones all the time. Drivers in states with hand-held bans also were more likely to pick hands-free phones. Twenty-two percent of drivers surveyed in states with hand-held bans reported always talking hands-free, compared with 13 percent in states without bans.

Texting bans are a different story. 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.

“Many drivers we surveyed weren’t clear about the laws in their state. And people who knew using hand-held phones or texting was banned frequently told us they didn’t think police officers strongly enforce the laws,” McCartt says.

Eighteen 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. 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.

For copies of “National survey of cellphone use when driving” by K.A. Braitman and A.T. McCartt and “Cellphone use while driving and attributable crash risk” by C.M. Farmer and K.A. Braitman, write Insurance Institute for Highway Safety, 1005 N. Glebe Rd., Arlington, Va. 22201; or email publications@iihs.org.

HIGH-TECH OPTIONS TO CURB DISTRACTION

When it comes to distracted driving, technology is part of the problem, but it also could be part of a solution that doesn’t rely on drivers to hang up their phones or police officers to enforce cellphone and texting bans.

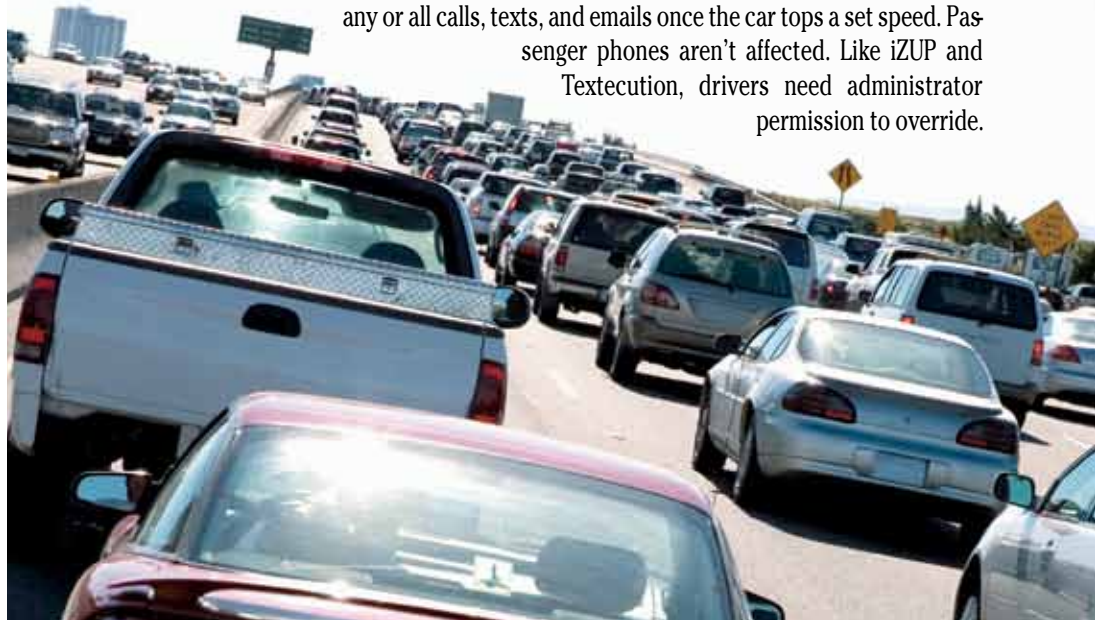
“Distracted driving is bigger than cellphone calls and texting, and we may need a bigger remedy,” says Anne McCartt, Institute senior vice president for research. “Promising approaches include assistance systems that alert drivers to impending danger. Preventing drivers from using phones when they are out on the road may help, too.”

Automakers are rolling out crash avoidance systems that warn drivers when they are not paying attention. 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; on the web at iihs.org). 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.

For cellphone-specific distractions, several blocking technologies are available right now, and more are on the way. They are designed to block or limit driver cellphone communications while a car is in motion. Most can be set up so drivers can always phone a family member or other prespecified contact, and passengers still get to use their phones even if drivers’ are blocked. Calls to 911 and other emergency numbers aren’t prohibited. Companies mainly market these technologies to parents of teen drivers and business and fleet owners to keep tabs on employees. Costs range from about \$35 to \$200 a year, including monthly service fees. Some companies offer free trials.

Current blocking software is designed for GPS-capable smart phones such as Androids or BlackBerrys. Software for iPhones is in the works but not yet available. Once the software detects through GPS that a vehicle is moving faster than a trigger speed (15 mph, for example), the blocking technology kicks in. Systems like iZUP and ZoomSafer block outgoing calls and texts, send incoming calls to voicemail and hold incoming texts and emails until vehicles stop. ZoomSafer also can send auto replies via Facebook, Twitter, or email that a person is driving. Another service, Textecution, blocks text messages in a moving vehicle and is currently available only for Androids. ZoomSafer allows phone users to enter a password to override the system when they ride as passengers, while iZUP and Textecution require permission from a system administrator such as a parent or fleet manager to do so.

CellControl, Guardian Angel MP, and others combine blocking software for phones with a small device that plugs into a vehicle’s onboard computer. These units use Bluetooth to transmit speed and other data to a driver’s phone. System administrators can customize settings to block any or all calls, texts, and emails once the car tops a set speed. Passenger phones aren’t affected. Like iZUP and Textecution, drivers need administrator permission to override.



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Vol. 45, No. 2, Feb. 27, 2010

Patterns of phone use and crashes don't match, and researchers are trying to figure out why this is the case.....1

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