



Using a cellphone while driving is risky and can lead to crashes. Making or taking calls, texting, or interacting with an electronic device in any way can take your eyes off the road at a critical moment. Teenage drivers may be especially susceptible to distractions. In response, states have enacted cellphone and texting bans, and insurers along with other groups have sponsored public education campaigns. Even though studies show that phone use by drivers has declined in states with bans, crashes reported to insurers haven't gone down during the same period. While phoning and texting have become synonymous with distracted driving in the news, distraction is a much larger problem than just electronic devices. A new study by IIHS in partnership with Virginia Tech helps clarify the risk of cellphone use behind the wheel and offers insight into other distracting things drivers do when they aren't using cellphones. The research points to the need for a broader strategy to deal with the ways that drivers can be distracted.

eep your eyes on the road" is a basic tenet of driving, and it goes without saying that anything that diverts a driver's attention could lead to a crash. As cellphones have surged in popularity, concerns have been raised about the safety implications of using them behind the wheel, and early studies linked talking on a cellphone directly to increased crash risk. Surprisingly, though, this apparent safety risk hasn't translated into higher crash rates. In fact, crashes reported to police and insurers have declined as cellphones and other electronic devices have proliferated.

New research by the Institute and the Virginia Tech Transportation Institute (VTTI) examined how drivers' near-crash and crash risk changes as their cellphone usage patterns change and how cellphone use fits in with other driver behavior and affects attention to the road. The research confirms that frequent cellphone users have more near misses or crashes. However, a new finding is that individual drivers' overall near-crash or crash rates don't increase the more they use their phones. That may be because drivers tend to do other things that take their eyes or minds off the road when they aren't engaged in phone conversations. There's also evidence that drivers compensate for the distraction of using cellphones, for example, by making calls while stopped or during less-demanding driving situations.

Though wireless phone use continues to climb among the general population, hand-held phone use by drivers appears to be leveling off. After doubling to 6 percent between 2000 and 2005, the percentage of drivers observed talking on hand-held phones while stopped at intersections has stood at 5-6 percent since then, the National Highway Traffic Safety Administration (NHTSA) estimates. Texting still appears to be on the rise. The percentage of drivers texting or visibly manipulating hand-held devices was 1.5 percent in 2012, up a fraction from 1.3 percent in 2011 but sharply higher than the 0.2 percent observed in 2005. Texting in 2012 was highest among 16-24 year-olds, at 3 percent.

At the same time, U.S. crash deaths have fallen sharply since 2006, and overall crashes reported to police and insurers have dropped, too.

This doesn't mean phone use behind the wheel is harmless. Numerous experimental studies have shown that talking on a cellphone reduces a driver's reaction time, potentially increasing crash risk. Cellphone use also affects how drivers scan and process information from the roadway. The cognitive distractions associated with cellphone use can lead to so-called inattention blindness in which drivers fail to comprehend or process information from objects in the road even if they are looking at them. Studies also have found negative effects of texting on driving performance.

The self-correcting nature of science

By Adrian Lund, president of IIHS and HLDI

Scientific inquiry can be messy. Data don't always line up as neatly as we would like, and conclusions we may have believed to be resolute need revision in light of new findings. So goes our understanding of the public health problem of distracted driving.

The research we share with you in the following pages of this special issue of *Status Report* is a product of our multiyear journey to attempt to understand and quantify the problem and determine possible countermeasures for effectively addressing it.

Almost 10 years ago, we said that "If you drive while phoning you're far more likely to get into a crash in which you'll be injured." The clear implication of this July 16, 2005, Status Report was that increasing driver use of cellphones would increase crash rates. That was early in the game.

We have since learned the relationship between cellphone use and crashes is far more complicated than this headline implied. We now understand that use of cellphones is only one of many ways in which drivers are distracted, and that increasing use of phones doesn't always increase crash risk, nor does decreasing their use necessarily reduce crash risk.

This doesn't invalidate the earlier research: Two carefully controlled epidemiological studies showed that people do crash more frequently when they talk on their phones. It is just that they also crash when they are distracted by other things — like talking to passengers, interacting with children or just daydreaming.

Our new research with VTTI confirms that a driver not using a cellphone is not necessarily more engaged with the driving task but, rather, may engage in other actions — intentionally or unintentionally — that take his or her attention off the road to the same or even greater extent. Future research will continue to correct our understanding and treatment of distracted driving. That is how science works.

"Using phones while driving raises a driver's risk of having a crash because it takes attention away from the road," says Chuck Farmer, the Institute's director of statistical services and the lead author of the new research. "Although there have been tragic cases of fatal crashes caused by drivers using electronic devices, an effect on overall crash rates isn't apparent. The research is still unfolding, but there is a basic conundrum: Why is a distracting behavior not increasing crash rates?"

In a pair of studies, Institute and VTTI researchers set out to try to answer the question. The idea was to measure how drivers' frequency of cellphone use affects their crash risk over time and examine what other kinds of potentially distracting behaviors drivers engage in when they aren't using phones.

Naturalistic driving study

One way to study the real-world effects of phone use on driving is by tracking drivers over a period of time. That's the approach used by VTTI in the 100-Car Naturalistic Driving Study conducted in 2003-04 for NHTSA. The study continuously monitored and videotaped the day-to-day driving and cellphone habits of 105 Virginia drivers for a year. The drivers were involved in a total of 57 crashes and 640 near crashes during the study period. Researchers coded a

This is not unlike the experience with antilock braking systems a few decades ago. Despite predictions by IIHS and others that were based on solid test track data, ABS didn't reduce crashes. This didn't mean that the track test data showing better braking were incorrect; rather we didn't understand that ABS lacked the necessary functionality to be more effective in the real world. Some years later, the introduction of electronic stability control — an enhancement of ABS — added that functionality by helping drivers maintain control of their vehicles, and now ESC is preventing thousands of crashes annually in the U.S.

Similarly, it is still true that cellphone distraction leads to crashes. But

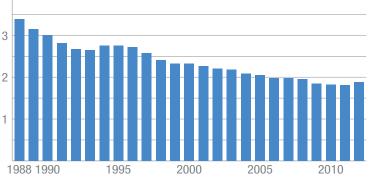
because it is only one of many distractions for drivers, reducing cellphone use isn't always enough to improve safety. To effectively reduce crashes, we need a holistic strategy that takes into account all kinds of distractions.

Widespread adoption of crash avoidance technologies is one vehicle-based solution

It is still true that cellphone distraction leads to crashes. But because it is only one of many distractions for drivers, reducing cellphone use isn't always enough to improve safety. To effectively reduce crashes, we need a holistic strategy that takes into account all kinds of distractions.

that will greatly reduce crashes in the future. While this technology will take some time to permeate the vehicle fleet, there are things that can be done in the near term to help reduce the overall problem of crashes on our roads. These include such proven countermeasures as adopting red light cameras, installing roundabouts in place of traffic signals and lowering speed limits on interstates and freeways. More than 30,000 crash deaths a year are unacceptable, no matter the cause, and we have the means to prevent them.

Drop in police-reported crashes per million miles traveled Rate, by calendar year, 1988-2012



near-crash event when drivers braked hard or made a sudden evasive maneuver to avoid a conflict.

Using this data set, IIHS collaborated with VTTI to research how phone use affects individual drivers' near crashes and crashes. While NHTSA and VTTI have published studies using these same data, the new analysis is the first to measure the amount of »



ellphones have become synonymous with distracted driving in recent years, but driver distraction and concerns that new technologies contribute to driver inattention were present long before cellphones came along.

A 1914 news article in The Suffolk Sun reported that the Suffolk, Va., police department had acquired a new motorcycle to help



The driver of this pickup told police he was changing a radio station before rear-ending a car in front, causing a 4-car pileup.

police catch speeders and enforce reckless driving laws. Besides speeding and turning corners without sounding a horn, officers were on the lookout for drivers who weren't looking forward and drivers reading mail behind the wheel.

When windshield wipers were introduced on American cars during the early 1900s, concerns were raised over their potential to lull drivers into a daze. With the advent of car radios during the 1930s, legislators in several states unsuccessfully attempted to restrict their installation on the grounds that radios could distract drivers and lead to crashes.

There is reason to be concerned about driver behavior. Research conducted in the 1970s showed that driver error accounts for an estimated 9 of 10 crashes, with driver inattention cited in 15 percent of crashes. That is still the case more than 30 years later.

In 2012, some form of distraction — not just cellphones — was a factor in 16 percent of police-reported crashes and 10 percent of fatal ones in the U.S., the National Highway Traffic Safety Administration (NHTSA) estimates. Among the 3,328 people who died

in distraction-related crashes during 2012, cellphone use was listed as a contributing factor for 12 percent of the deaths, the agency estimates. Police reports for these crashes indicated that the driver was talking on, listening to, or manipulating a cellphone (or other cellphone activity) at the time of the crash, NHTSA says.

The other 88 percent of crashes in which distraction was listed as a contributing factor involved some other kind of driver distraction.

"Oftentimes, discussions regarding distracted driving center around cellphone use and texting, but distracted driving also includes other activities such as eating, talking to other passengers, or adjusting the radio or climate controls, to name but a few," NHTSA states in its April 2014 bulletin on distracted driving.

For example, in a crash coded as distraction-related in 2005, a 31-year-old man told responding police officers that he had been trying to change the radio station in his pickup truck and wasn't looking at the road ahead when he rear-ended an SUV in



ing behavior, rather than only looking to see if they were distracted in the moments before and during a near miss or crash. The design allowed researchers to test whether changes in the amount of an individual driver's cellphone use over time were associated with changes in the driver's overall near-crash or crash rates. In other words, was there a

time that drivers engage in distract-

tripled when reaching for, answering or dialing a cellphone. The estimated risk of a near crash or crash was about 17 percent higher when other types of cellphone interactions (e.g. talking) were included, but this result wasn't statistically significant.

Interacting with a cellphone accounted for a small amount of driving time overall — 12 percent. Of this, drivers spent 7 percent of the time talking or listening,



Drivers who frequently handled cellphones, beyond just talking on them, had higher near-crash or crash rates than drivers who didn't handle cellphones as often.

heavy traffic. The impact set off a four-vehicle pileup. Information about the crash is recorded in the National Motor Vehicle Crash Causation Study, 2005-07.

In another case from the same database, a 40-year-old female motorcyclist was killed in 2007 after the driver of a minivan stopped alongside the road abruptly attempted a U-turn in front of the motorcycle. The driver told police officers that prior to the crash he had been talking with his passenger and looking rearward for another person they were supposed to meet and didn't notice the motorcycle.

It is important to note that distractionrelated crashes probably are undercounted. State and federal crash databases don't fully or consistently record information on the contribution of driver cellphone use or other distractions to crashes. Driver selfreports of phone use at the time of crashes are unreliable since people are often reluctant to admit to unlawful or culpable behavior. Without a court order, cellphone records typically are off limits in the U.S. due to privacy rules. ■

dose-response relationship between the amount of cellphone use and near-crash or crash risk?

The studies focused on the effects of talking on or manipulating hand-held cellphones. They didn't look specifically at composing, sending or reading text messages since the data were collected a decade ago when texting wasn't as prevalent as it is now. Plus, with video data it is hard to distinguish texting from dialing or searching for phone contacts. Browsing the Internet, checking email and other applications weren't specifically studied because they were rare when the data were collected. Still, the findings may relate to texting or other applications since making or taking calls on hand-held cellphones or searching for contact numbers are all visual-manual tasks that require drivers to take their eyes off the road.

In the new IIHS-VTTI research, a driver's near-crash/crash rate nearly 4 percent holding or viewing a cellphone and 1 percent reaching for or dialing. About a third of trips had some cellphone interaction. Drivers were about 13 percent more likely to interact with their cellphones when their vehicles were stopped than when moving.

Looking at the data by age and gender, drivers younger than 21 had higher cellphone use rates than drivers 21 and older, and female drivers had higher use rates than males, but the differences were only marginally statistically significant.

Drivers who frequently handled cellphones, beyond just talking on them, had higher near-crash or crash rates than drivers who didn't handle cellphones as often, the study found. This could have been because frequent cellphone users were riskier drivers in general, even when not on the phone. For example, young people are the most frequent cellphone users and also are the riskiest drivers. »





When not on the phone, drivers did other distracting things such as interacting with passengers or eating and drinking.

On the critical question of a dose-response relationship for individual drivers, there was no clear relationship between cellphone interaction rates and event rates. Although the percentage of time drivers spent interacting with a cellphone varied substantially over the study year, researchers were unable to link periods of increased or decreased phone use with a corresponding rise or fall in near crashes or crashes. On average, for each 1 percentage point increase in a driver's cellphone interaction rate, the event rate increased by 0.1 percent. Statistically this was the same as no change.

On a more granular level, the specific activities that make up cellphone interaction — talking on a cellphone, holding or viewing one

and reaching or dialing — were associated with different risks. For each 1 percentage point increase in a driver's cellphone talking rate, the event rate fell by 0.3 percent. For each 1 percentage point increase in a driver's cellphone holding/viewing rate, the event rate rose by 0.3 percent. For each 1 percentage point increase in a driver's cellphone reaching/dialing rate, the event rate rose by 0.4 percent. Although not statistically significant, these estimates suggest an increase in event rates associated with those portions of cellphone use that are more likely to take a driver's eyes off the road. However, when all portions were viewed together, the risk evens out because of the much greater time associated with talking.

Narrowing the focus to near crashes or crashes in which the drivers in the study were deemed at fault had the same result.

"The failure to find a dose-response relationship between cellphone use and near crashes or crashes may be tied to the kinds of things drivers do when they aren't on the phone," Farmer says.

Other distracting behaviors

When not using a phone, drivers tended to engage more in other distracting behaviors such as interacting with passengers, eating, drinking or smoking, the second study found. When drivers were talking on the phone, they were more likely to look at the road ahead and their mirrors than when they weren't on the phone.

More than a third of the trips involved some other secondary activity, sometimes in conjunction with cellphone use. Other than using cellphones, the most common secondary activities were interacting with a passenger (12 percent of driving time), holding but not otherwise interacting with an object (6 percent), " page 10



ne solution to the problem of distracted driving may be technology that intervenes for drivers when they aren't paying attention to the road. Drivers get into fewer crashes when their vehicles are equipped with front crash prevention systems, and new technology is on the way to connect vehicles to each other and roadway infrastructure to alleviate crashes.

Crash avoidance features can address all kinds of distractions by bringing drivers' attention back to the road or taking action for them. Front crash prevention systems with autonomous braking that can stop drivers from rear-ending another vehicle or slow them down enough to lessen the impact are making a measurable difference in insurance claims (see Status Report, July 3, 2012, at iihs.org).

Launched in 2013, the Institute's front crash prevention ratings are helping drive adoption of the most effective technologies. In just two rounds of tests, automakers have shown a strong commitment to improving systems in order to maximize the safety benefits (see Status Report, May 29, 2014). The European New Car Assessment Programme (euroncap.com) rates

front crash prevention systems for models sold in Europe, and the National Highway Traffic Safety Administration (NHTSA) identifies vehicles equipped with advanced technology features at safercar.gov.

The Institute has estimated that if all vehicles were equipped with crash avoidance features, 1.9 million crashes, including 1 in 3 fatal ones, could potentially be prevented or mitigated if the systems worked perfectly (see Status Report, May 20, 2010).

Right now, though, there isn't a universal quick fix for distraction's role in crashes. 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. It typically takes three decades for safety features to spread through the fleet, HLDI research indicates (see Status Report, Jan. 24, 2012).

Future technology could include other potential game changers. A consortium of federal and state agencies, research organizations and automakers is developing vehicleto-vehicle and vehicle-to-infrastructure communications platforms that could take crash avoidance even further. The idea is that cars will be able to communicate with

each other and roadway infrastructure to help ease congestion and avoid crashes.

NHTSA estimates that connected vehicle technology could potentially address about 80 percent of crashes involving nonimpaired drivers. The agency is laying the groundwork for adoption of vehicle-to-vehicle communication technology for passenger vehicles.

Driverless cars, such as the ones tech giant Google is developing and testing, are another promising approach.

In the meantime, the Institute, federal government and other road safety groups worldwide are attempting to understand and quantify the potential and real-world benefits of using technology to compensate for driver mistakes that can lead to crashes.

In 2013, the Institute and its member companies began a \$30 million project to expand the Vehicle Research Center in Ruckersville, Va. A newly enlarged outdoor track provides space for high-speed maneuvers plus room to evaluate front crash prevention systems and other technologies. Work continues on a 300-by-700-foot covered outdoor track to enable the Institute to evaluate vehicle-based systems regardless of the weather. Robotics systems also are in the works.



tate bans on hand-held phone use by all drivers have successfully curbed phone use behind the wheel but haven't produced a similar drop in crashes, previous analyses of insurance claims have shown. A new HLDI analysis indicates that even with strong enforcement, cellphone and texting bans aren't reducing crashes reported to insurers.

New York in 2001 became the first state to bar all drivers from talk-

Strong enforcement of cellphone and texting bans can change driver behavior. But is changing behavior enough to reduce crash rates?

ing on a hand-held phone while driving. Currently, 14 states and the District of Columbia restrict all drivers from using a hand-held cellphone. More states have targeted texting. Fortyfour states and D.C. ban all drivers from text messaging.

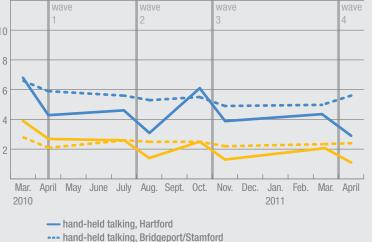
Institute research has documented that all-driver bans on handheld phone conversations can have large and lasting effects on phone use. Based on observations of drivers conducted up to seven years after bans were implemented in New York, the District of Columbia and Connecticut, the rates of driver hand-held cellphone conversations were an estimated 24-76 percent lower than would have been expected without a ban (see Status Report, Oct. 13, 2009).

"Since we know that people have gotten into crashes while using cellphones, it's natural to expect crashes to decline following enactment of driver cellphone use bans. So far, though, this hasn't been the case for crashes reported to insurers," says Matthew Moore, vice president of HLDI.

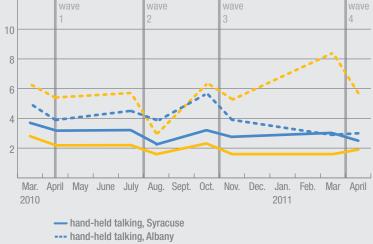
A 2009 analysis by HLDI found that hand-held cellphone bans had no effect on insurance claim rates, and a 2010 HLDI study

Drivers hang up cellphones amid use bans, strong enforcement in 2 states

Connecticut: Percent of drivers observed using phones before and during special enforcement campaigns in Hartford



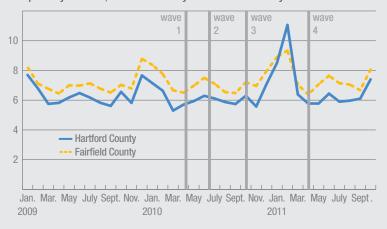
New York: Percent of drivers observed using phones before and during special enforcement campaigns in Syracuse



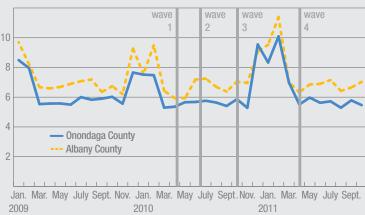
 device manipulation, Hartford - device manipulation, Syracuse --- device manipulation, Bridgeport/Stamford --- device manipulation, Albany

Decline in cellphone use doesn't produce drop in crashes reported to insurers

Connecticut: Collision claim frequencies by month for vehicles up to 9 years old, Hartford County vs. Fairfield County



New York: Collision claim frequencies by month for vehicles up to 9 years old, Onondaga County (Syracuse) vs. Albany County



found that texting bans aren't reducing insurance claims either (see Status Report, Feb. 27, 2010, and Sept. 28, 2010, at iihs.org).

Strong highway safety laws coupled with well-publicized enforcement are a proven countermeasure for changing driver behavior. This approach has worked to increase safety belt use and also to reduce the problem of alcohol-impaired driving.

Following this model, the National Highway Traffic Safety Administration (NHTSA) supported special enforcement demonstration programs in Hartford, Conn., and Syracuse, N.Y., aimed at reducing talking or texting on hand-held phones. Both states ban hand-held phone use and texting. Four waves of enforcement accompanied by media blitzes were conducted from April 2010 to April 2011.

The program was a success. After this high-intensity enforcement, the number of drivers observed holding a hand-held cellphone to

their ear fell 57 percent in Hartford and 15 percent in the comparison communities of Bridgeport and Stamford, Conn. In Syracuse, the number of drivers observed engaged in hand-held phone conversations declined 32 percent. At the same time, the practice also decreased in the comparison community of Albany, N.Y., by 40 percent.

Observed rates of texting or otherwise manipulating hand-held phones also decreased sharply in both Hartford and Syracuse, while the comparison communities experienced only slight declines.

"NHTSA's study was well-done," says Adrian Lund, president of HLDI and IIHS. "It shows that good enforcement can change driver behavior. However, the question remains, is changing driver behavior enough to affect crash rates?"

To determine whether crash rates shrank as a result of the enforcement campaigns, HLDI analysts compared collision claims » in the counties containing the cities of Syracuse (Onondaga County) and Hartford (Hartford County) with the comparison counties of Albany County, New York, and Fairfield County, Connecticut, and the rest of New York and Connecticut for the period of Jan. 1, 2009 through Oct. 31, 2011. HLDI didn't find a corresponding reduction in crashes reported to insurers from the program counties relative to the comparison counties, even though the rates of cellphone use and texting decreased in both program cities.

There are several possible reasons for the bans' lack of effect on crashes. One is that drivers who weren't using their phones may have been distracted by something else. The new IIHS-VTTI study indicates this may be the case.

Another is that drivers may have switched to hands-free calling, which is legal in both states. These drivers still may be distracted by their conversations even though their hands are on the wheel. It is difficult to estimate the prevalence of hands-free phone use. In NHTSA's observational surveys, drivers are coded as using a handsfree phone only if researchers can see them wearing an earpiece or headset. They don't count drivers who may be using a vehicle's Bluetooth-enabled system. Observed use of hands-free headsets declined in Hartford and the comparison communities following the enforcement waves, NHTSA reports. In Syracuse, the observed rate of headset use was essentially unchanged, while observed headset use decreased in the comparison community.

More recently, NHTSA sponsored additional high-visibility enforcement demonstrations between November 2012 and June 2013 in California and Delaware. Both states ban driver use of hand-held cellphones and texting. Results, which were released in April, were inconclusive. Although the observed rate of hand-held phone use declined in California and Delaware, the rate of handheld phone use also fell in comparison communities. HLDI hasn't analyzed collision claims in these states in relation to the enforce-

ment campaigns.

All-driver bans have resulted in long-term reductions in observed hand-held cellphone

use. Teenage drivers

are harder to reach.

Separately, the Institute reviewed research on the effects of all-driver hand-held cellphone bans and texting bans as part of the March 2014 Engaged Driving Symposium organized by the Association for the Advancement of Automotive Medicine

and sponsored by State Farm. The findings were mixed. As noted above, the evidence suggests that all-driver bans on hand-held cellphone conversations have resulted in long-term reductions in observed hand-held cellphone use. Drivers in ban states reported higher rates of hands-free cellphone use and lower overall cellphone use compared with drivers in non-ban states. However, bans on all cellphone use by teenage drivers haven't been shown to reduce their phone use. As for texting bans, it is unknown whether these are reducing the rate of texting at the wheel. The findings of 11 studies of the effects of bans on crashes, including two by HLDI, also were mixed. Several had methodological and other issues that limit their findings.

For copies of the HLDI bulletin "Evaluation of U.S. DOT special enforcement campaigns for hand-held cellphone and texting bans" and "Driver cellphone and texting bans in the United States: evidence of effectiveness" by A.T. McCartt et al., email publications@iihs.org.



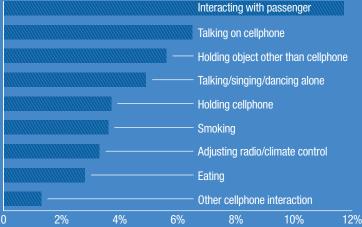
(« from page 6) talking/singing/dancing (5 percent) and smoking (4 percent). Adjusting the vehicle's radio or temperature controls accounted for 3 percent of driving time.

On average, as drivers spent more time talking on the phone, they spent significantly less time doing other distracting things, and the amount of time their eyes were off the driving task fell by just a tiny percentage. The fact that they looked at the road ahead when they were talking on the phone offset the times when they looked away to make or take calls. Conversely, drivers spent more time looking away from the driving task when they were doing things other than talking on a phone.

A VTTI study sponsored by NHTSA and published in 2010 using data from the 100-Car Naturalistic Driving Study examined the likelihood of behaviors secondary to driving relative to near crashes or crashes. The risk of a near crash or crash was estimated to be 1.3 times as high when engaging in a moderately demanding behavior such as inserting a CD, eating, or talking on a cellphone.



How cellphones rank among other driver behaviors Percent of driving time engaged in secondary behavior



Other secondary behaviors decline when people talk on cellphones Estimated percentage of moving vehicle time spent on other secondary behavior by driver cellphone use

Secondary behavior	No cellphone interaction	Interacting with cellphone	Talking on cellphone	Overall
Interacting w/ passenger	12.5	5.3	0.1	11.7
Talking/singing/dancing alone	5.3	2.3	0.1	4.9
Holding object other than cell- phone but not interacting with it	5.2	9.2	6.1	5.6
Adjusting radio/climate control or inserting/retrieving CD/ cassette	3.6	1.3	0.5	3.3
Eating	3	0.8	0.6	2.8
Drinking	1	0.2	0.2	0.9
Grooming	0.7	0.7	0	0.7
Reading	0.3	0.7	0.4	0.4

"The latest research from IIHS and VTTI bolsters earlier VTTI findings on other sources of distraction beyond cellphones," says Charlie Klauer, a VTTI research scientist who is a co-author of the IIHS-sponsored studies. "What we are consistently finding is that the tasks requiring the driver to look away as well as manually manipulate an object/cellphone are also those tasks that increase near-crash/crash risk."

Drivers in the IIHS-VTTI studies appeared to compensate for the distraction of using a cellphone by, for example, reducing their travel speeds at the start of a call. Speeds within six seconds of initiating or receiving a call on average were 5-6 mph slower than at other times.

"To effectively tackle the problem of distracted driving, we need a broader approach that takes into account the many and varied sources of driver distraction," says Adrian Lund, president of IIHS and HLDI. "Singling out cellphones may lead drivers to disregard

the fact that other behaviors that divert their attention from the road are risky, too. Fortunately, there is both new and old technology to help us address the problem."

Crash avoidance technology, such as front crash prevention systems, should help offset some of the effects of distracted driving as these systems make their way into more vehicles on the road. In the meantime, existing traffic engineering countermeasures such as red light cameras and roundabouts also appear to get drivers to slow down and pay more attention to surrounding traffic (see Status Report, Feb. 1, 2011, and Nov. 19, 2005, at iihs.org). Primary safety belt laws, graduated driver licensing for beginning teen drivers and alcohol interlocks for first-time offenders are additional strategies proven to save lives and reduce crashes.

For copies of "Relationship of near-crash/crash risk to time spent on a cellphone while driving" and "Secondary behavior of drivers on cellphones," by C.M. Farmer et al., email publications@iihs.org.

Status Report

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Note: All depicted drivers are IIHS employees and were photographed on a closed track.

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