

**Statement before the Oregon Senate
Committee on the Judiciary**

Cell Phones and Crash Risk

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February 14, 2007

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The Insurance Institute for Highway Safety is a nonprofit research and communications organization that identifies ways to reduce the deaths, injuries, and property damage on our nation's highways. We are sponsored by the nation's automobile insurers. The Institute is submitting for the record information about the effects of cell phone use on motor vehicle crash risk.

Common sense tells us that handling and dialing cell phones while driving compromise safety, and evidence is accumulating that phone conversations increase crash risk. Institute research released in 2005 quantifies the added risk — drivers using phones are 4 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 sustained in crashes between April 2002 and July 2004.¹ The main finding of a fourfold increase in injury crash risk was consistent across groups of drivers. Male and female drivers experienced about the same increase in risk. So did drivers older and younger than 30 and drivers using hand-held versus 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 a trip.

The study was conducted in the Western Australian city of Perth. The Institute first tried to conduct this research in the United States, but US 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. Phone use 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

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 would 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 our research found that either phone type increases the risk. 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 Canadian research that showed phone use was associated with a fourfold increase in the risk of a property damage crash.² This Canadian study also used cell phone billing records to establish the increase in risk. Taken together, the Institute and Canadian studies confirm that the distractions associated with phone use, including the cognitive distractions from phone conversations, contribute significantly to crashes.

Well-Publicized Enforcement is Crucial

In 2001 New York became the first US state to enact a law banning the use of hand-held cell phones while driving. Institute researchers monitored the effectiveness of the law in reducing cell phone use. Immediately following enactment of the law, researchers found a 50 percent decline in phone use rates. However, when researchers measured cell phone use rates one year after enactment, they found that use rates had returned almost to levels before the law. Specifically, the rate of driver use of hand-held phones was 2.3 percent in 4 areas of the state before police started warning violators in November 2001. Several months after the ban, the rate had dropped to 1.1 percent, a significant decline, but by March 2003 it was 2.1 percent, which isn't significantly different from before the law.³

Institute researchers also evaluated the effectiveness of the Distracted Driving Safety Act, which went into effect in July 2005 in the District of Columbia (DC). The Act prohibits all forms of inattentive driving that result in the unsafe operation of a motor vehicle. The law also bans talking on hand-held phones. Researchers found that talking on hand-held phones declined significantly from 6.1 percent before the law to 3.5 percent shortly after. When measured a year later, use rose to 4 percent but still was significantly lower than before the law.⁴ The New York cell phone law, and to some extent the DC law, illustrate a typical pattern when a new traffic law is introduced. Initial compliance is followed by a gradual return to previous behavior unless there is enforcement that's well publicized and vigorous.

References

1. McEvoy, S.P.; Stevenson, M.R.; McCartt, A.T.; Woodward, M.; Haworth, C.; Palamara, P.; and Cercarelli, R. 2005. Role of mobile phones in motor vehicle crashes resulting in hospital attendance: a case-crossover study. *British Medical Journal* 331:428.
2. Redelmeier D.A. and Tibshirani R.J. 1997. Association between cellular-telephone calls and motor vehicle collisions. *New England Journal of Medicine* 336:453-58.
3. McCartt, A.T. and Geary, L.L. 2004. Longer term effects of New York State's law on drivers' handheld cell phone use. *Injury Prevention* 10:11-15.
4. McCartt, A.T. and Hellinga, L.A. 2007. Longer term effects of Washington, DC, law on drivers' hand-held cell phone use. *Traffic Injury Prevention*, in press.