On February 13, 1997, two Canadian scholars from the University of Toronto published findings in the *New England Journal of Medicine* that linked drivers' use of cellular phones in cars to an increased risk of accidents. The report, authored by Dr. Donald A. Redelmeier and Professor R. J. Tibshirani, a statistician, provided significant statistical evidence that drivers talking on cell phones were up to four times more likely to be involved in traffic accidents than other drivers. It also suggested that phones with hands-free dialing—generally thought to be safer because the driver could keep both hands on the wheel when using them—did not significantly reduce the risk of accident. Redelmeier and Tibshirani's research had implications for many parts of modern life, including the insurance industry, the medical profession, and every driver and cell phone user.

Redelmeier and Tibshirani derived their conclusions from police accident records, cell phone usage reports, and testimony from 699 drivers who owned cellular phones and had been in accidents involving significant damage to property (but in which no people were hurt). The two scholars compared the drivers' telephone usage on the day of the accident to that of the day before. In almost one of every four cases, drivers who had accidents had initiated a telephone call within ten minutes before the time of the accident. On average these drivers used their cell phones nine times each day, and about 40% of them used their phones to call for assistance after the accident. However, the study also found that the drivers using their cell phones did not necessarily cause the accidents. Although holding a cell phone in one hand meant that the drivers were unable to keep both hands on the wheel, in many cases, Redelmeier and Tibshirani discovered, the drivers were simply unable to avoid other vehicles that steered into them. The two scholars also found that hands-free cell phones or cell phone holders—promoted by many cellular companies as a safer alternative to the standard telephones—did not significantly change the risk of accident. One implication of this finding, the study concluded, was that the telephones themselves were not responsible for the increased risk of collision. Instead, it was the distraction caused by drivers' using the phone that was responsible rather than the phone itself.

The implications of Redelmeier and Tibshirani's research were wide-ranging, especially in Western societies that have become reliant on instant portable technology. In a report on the study published in the same issue of the *New England Journal of Medicine* two Massachusetts scholars, Malcolm Maclure and Murray A. Mittleman, concluded that drivers double their risk of having an accident within five minutes of starting a cellular call. They also demonstrated that, if cellular usage spread to where one out of ten drivers had a cell phone, the cost to the United States alone would be as much as $4 billion a year.

Redelmeier and Tibshirani's study opened a serious debate about the need for government regulations for cellular telephone users. About forty states placed limits on cell phone use while driving. Some, such as New York, banned the use of cell phones in cars, labeling them a dangerous, even life-threatening, distraction. Even the U.S. Congress considered a nation-wide ban on the use of cell phones while driving. Other institutions took a more cautious approach, claiming that statistical evidence did not support an overall ban. They maintained that other forms of distraction, ranging from cigarettes and CD players to noisy babies in a rear seat, were statistically more likely to cause accidents than cell phone use. Based on a 2001 survey of 32,000 accidents the American Automobile Association (AAA) determined that cell phones were not even among the top five causes of traffic accidents. Many of such institutions concluded that cell phone users needed driver education and caution, not additional government regulation.

The cell phone debate also influenced the way car designers incorporated new communications technology into their concept vehicles. There is still considerable debate about how drivers should access and read this technology. Should it be activated by voice or by touching a button on the steering wheel? Should the response be a visual readout...
projected on the windscreen is there another safer way? Most auto designers have taken steps to incorporate some of the functions of cell phones into the systems of the vehicle itself. But drivers still continue to use cell phones while driving, sometimes safely but often—as Redelmeier and Tibshirani’s report suggested—not.

FURTHER READINGS


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