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### **Driving Fatalities Surge on US Presidential Election Days**

Toronto, ON (September 30, 2008) – Sunnybrook researcher Dr. Donald Redelmeier and Stanford University statistician Robert Tibshirani have found an increased risk of fatal motor vehicle crashes on United States (US) presidential election days.

US presidential elections have large effects on public health by influencing policy, the economy, and military action. "Whether the US presidential electoral process has a direct effect on public health had never been tested despite the endless media commentary and the 1 billion dollars spent on this year's election alone," says Dr. Donald Redelmeier.

"We thought efforts that mobilize about 55 per cent of the population to vote, along with US reliance on motor vehicle travel, might result in increased fatal motor vehicle crashes during US presidential elections," says Redelmeier, lead investigator of the study and staff physician at Sunnybrook Health Sciences Centre, "indeed, we found a significant increase in traffic deaths on election days."

The investigation looked at all US presidential election days over the last 32 years, from Jimmy Carter in 1976 to George Bush in 2004, during the hours of polling. They also looked at the same hours on the Tuesday immediately before and immediately after as control days. Their main finding was that the average presidential election led to about 24 deaths from motor vehicle crashes.

This increased risk extended to pedestrians and persisted across different ages, sexes, regions, polling hours, and whether a Democrat or Republican was elected. The increased risk exceeded the risk on Super Bowl Sundays, New Years Eve, or the theoretical chance of casting a pivotal vote. The increased risk also resulted in about 800 additional individuals with serious nonfatal injuries.

Explanations for the increased risk include speed, distance, distraction, emotions, unfamiliar pathways traveling to polls, and the potential mobilization of unfit drivers. "A 4 per cent increase in average driving speed," says Redelmeier, "would be sufficient by itself to account for the 18 per cent observed increase in fatal motor vehicle crashes."

"What these findings suggest is the immediate need for safety reminders by electioneers who encourage people to get out to vote," says Redelmeier, also a professor of medicine at the University of Toronto. "Good advice would be to avoid excess speed, alcohol, and other distractions as well as to ensure seatbelt use."

Other interventions worth considering might include subsidized public transportation, voting centers within walking distances, tamper-proof remote voting, or more traffic enforcement on election day. "In light of these findings, the US president owes a larger debt to the American people than is generally recognized" says Redelmeier.

The study was supported by the Canada Research Chair in Medical Decision Sciences, the Canadian Institutes of Health Research, the National Institutes of Health Resuscitation Outcomes Consortium, the Patient Safety Service of Sunnybrook Health Sciences Centre, and the Institute for Clinical Evaluative Sciences in Ontario.

The results of the study are published in the October 1, 2008 issue of the *Journal of the American Medical Association*.

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