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## Motor Vehicle Collisions: What Influences the Risk?

The older you get, the less you risk being injured on the roads. This is one encouraging finding from a study of motor vehicle collision injuries among a nationally representative sample of Canadians.

Motor vehicle collisions (MVCs) are a major cause of injuries and fatalities. Injuries outnumber fatalities by about ninety times in Canada (2730 deaths and 212,347 injuries in 2004) and represent a major economic burden. Yet, because of a greater ease in obtaining the data, research into the health and lifestyle factors affecting MVCs has tended to focus on fatalities rather than injuries.

Not so with Evelyn Vingilis and Piotr Wilk's study, published recently in *Traffic Injury Prevention*. The study takes advantage of the prospective nature of Canada's National Population Health Survey to investigate the risk of injury among a large sample of Canadians over an eight-year period (1994-2002).

Just under 3% of the sample reported an MVC injury at one of the five two-yearly cycles. Injuries were more commonly reported by women than men, and by younger rather than older adults. The probability of injury increased up to the age of 25, and then declined regularly with age. In fact, over three times the proportion of adults aged 16 to 45 years reported an MVC injury compared with seniors aged over 65 years.

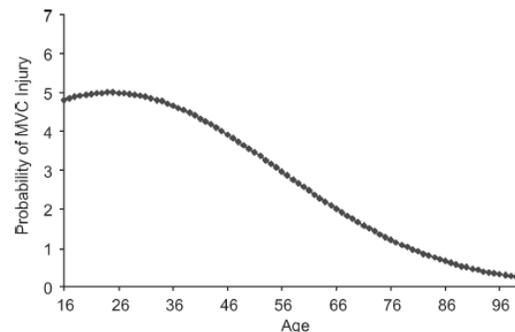


Figure 2 Probability of MVC injury by age (predicted values).

The analysis focused on four health-related factors - binge drinking, poor health, psychological distress and medication use - and explored whether, individually or in combination, these variables put individuals more at risk of an MVC injury during the next two years. Medication in this study includes a wider range of drugs than is usually taken into account, including pain relievers, tranquilizers, antidepressants and sleeping pills.

Reports of subsequent MVC injuries were associated with all four factors, especially health status and medication use. Injuries were twice as common among individuals who declared themselves in poor health than among healthy individuals. The difference was even greater for those taking two or more medications: 6.2% reported an injury compared with 2.0% of those who took no medication.

Although gender differences were not significant once all factors were taken into account in a logistic regression model, age remained an important predictor of injury. Of the four health-related variables, only poor health and medication use significantly increased the probability of reporting an injury. Binge drinking alone had no apparent effect. In combination with medication use, however, binge drinking was particularly risky.

Why does binge drinking alone appear to have no significant effect given all the attention given to drunk-driving? Why are seniors less at risk than young and even middle-aged adults? Are they more careful drivers, or are they simply less often on the roads? What are the limits of this study, and what are its policy implications? Come and discuss these and other questions at the UWO RDC Brown Bag on Wednesday, February 11, 2009, 12:30-1:30 at the Social Science Centre, Room 5220.

Note: Summary prepared by Heather Juby, RDC Knowledge Transfer Coordinator, based on Evelyn Vingilis and Piotr Wilk. 2007. Predictors of Motor Vehicle Collision Injuries among a Nationally Representative Sample of Canadians published in *Traffic Injury Prevention* 8(4): 411-418. For more information or to enquire about the concepts, methods or data quality in this study please contact Piotr Wilk at [piotr.wilk@mlhu.on.ca](mailto:piotr.wilk@mlhu.on.ca).

The analysis was carried out at the University of Western Ontario Research Data Centre. The Research Data Centre program is part of an initiative by Statistics Canada, the Social Sciences and Humanities Research Council, the Canadian Institutes of Health Research and university consortia to strengthen Canada's social research capacity.