

## RESEARCH MINUTE

January 2013

### High opioid doses associated with risk of road trauma among drivers in Ontario

Adult drivers in Ontario who were dispensed moderate to high doses of opioids were up to 42% more likely to experience an injurious road accident than people who were taking lower doses of these drugs.

#### What does this mean?

- Drivers dispensed higher doses of opioids were more likely to visit the hospital with injuries from motor vehicle accidents than drivers who were dispensed lower doses of opioids.
- There was no apparent link between opioid dose and road trauma among non-drivers (for example, vehicle passengers, pedestrians and cyclists).

#### Clinical Implications

- ✓ Consider warning patients being dispensed moderate to high doses of opioids (>50 mg morphine or equivalent) of the possibility of impaired driving when taking these drugs.
- ✓ Extra precaution should be taken when doses exceed 100mg morphine or equivalent
- ✓ This may be of particular importance in the period before a patient acclimatizes to a higher opioid dose.

#### How do we know this?

The ODPRN conducted a population-based nested case-control study on patients aged 18 to 64 eligible for Ontario public drug coverage. Cases were dispensed oral codeine, morphine, oxycodone, hydromorphone, or transdermal fentanyl patches for a period of time overlapping with an ED admission for road trauma between April 1, 2003 and March 31, 2011. Controls were matched to cases, but did not have an ED admission for road trauma during the study period. Dose was stratified into 5 categories (very low, low, moderate, high and very high) based on morphine equivalents (MEQs). In a primary analysis, there was no association between escalating dose and road trauma. In a sub-group analysis of drivers only, escalating dose increased the odds of visiting the ED with road trauma; low, moderate and high dose users were 21, 29 and 42% more likely to experience road trauma than very low dose users, respectively (adjusted odds ratio (aOR )1.21, 95% confidence interval (CI) 1.02 – 1.42; aOR 1.29, 95% CI 1.06 – 1.57; aOR 1.42, 95% CI 1.15- 1.76, respectively), although attenuation of this risk was noted among patients prescribed very high doses (over 200 MEQ). In a secondary analysis, there was no difference in risk of road trauma between new opioid users and more long-term users of opioids.

Gomes T, Redelmeier DA, Juurlink DN, Dhalla IA, Camacho X, Mamdani MM. Opioid dose and risk of roadtrauma in Canada: a population-based study. *JAMA Intern Med*. Published Online First: 14 January 2013.

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