**Appendix Table E6. Observational Studies of Long-Term Opioid Use and Motor Vehicle Accidents**

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| **Author, year** | **KQ** | **Type of Study, Setting** | **Eligibility Criteria** | **Comparison Groups** | **Population Characteristics** | **Sampling Strategy** |
| Gomes, 2013 | KQ2b | Case-Control Canada | Residents aged 15-64 with public drug coverage and an opioid prescription (excluding methadone (2003-2011) at least 6 months of continuous eligibility for public drug coverage before their index date and at least 1 opioid prescrip-tion with a duration that overlapped their index date. Cases and controls were excluded if they had invalid patient identifiers, had missing information about age or sex, received palliative care services in the 6 months before their index date, lived in a long-term care home at the index date, or had a prescription for a nonstudy opioid with a duration that overlapped the index date. | Cases: ED with an external cause of injury related to road trauma (codes V00 to V89 from ICD-10) (n=5,300  matched a control) Controls: (n=5300)   1. 1-<20 mg/day 2. 20-<50 mg/day C. 50-<100 mg/day D. 100-<200 mg/day   E. >200 mg/day | **Cases vs. Controls**  Mean age (years): 45.76 vs 45.75  Female sex: 48.6%  Urban resident: 83.75% vs. 83.98  Social Assistance:22% vs. 21% Disability support: 67.9% vs.  66.6%  Duration of use (years): 7.09 vs. 6.84  Charlson score  No hospitalization:61.7% vs. 62.3%  0: 23.4% vs. 22.4%  1: 6.85% vs. 6.32%  ≥2: 7.96% vs. 8.49% | Incidence density sampling  Cases were matched to controls by sex, age (within 3 years), index year (within 1 year), ED visit for road trauma in the past year, and disease risk index (within 0.2 SD).  Cases with no matched controls were excluded from analyses. |
| Note: The references are located in Appendix C.  CI=confidence interval; ED=emergency department; ICD=International Classification of Diseases | | | | | | |

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| **Author, year** | **Screened Eligible Enrolled Analyzed**  **Loss to Followup** | **Adjusted Variables For Statistical Analysis** | **Main Results** | **Funding Source** | **Quality** |
| Gomes, 2013 | Screened population: 549,878  Eligible Cases:5300 Eligible Controls: 43,736  Controls matched 1:1 | Logistic models adjusted for: age, past (3 years) hospitalization for alcoholism, past (1 year) ED visit for alcoholism, duration of opioid treatment, medication use in past 180 days (ie, selective serotonin reuptake inhibitors, other antidepressants, antipsychotics, benzodiazepines and other depressants of the central nervous system, separately), number of drugs dispensed in the past 180 days, and numbers of physician and ED visits in the past 1 year. | Risk estimates reported as adjusted OR  Risk of motor vehicle crash  A. 1 (reference)  B. 1.09 (95% CI 0.97-1.21)  C. 1.07 (95% CI 0.94-1.22)  D. 1.08 (95% CI 0.93-1.24)  E. 1.00 (95% CI 0.88-1.15)  Dosing  Relative to 1 to <20 mg MED/day, the odds of road trauma among drivers after adjustment for age, alcoholism history, concomitant medication use, total number of drugs , and number of physician and emergency department visits was 1.21 (1.02 to 1.42) for 20 to 49 mg,  1.29 (1.06 to 1.57) for 50-99 mg, 1.42 (1.15 to 1.76) for  100 to 199 mg, and 1.23 (1.02 to 1.49) for >200 mg | MOHLTC  Drug Innovation Fund and ICES, a  nonprofit research institute sponsored by the Ontario MOHLTC. | Good |