**Supplemental Content 2.**

Data Sources and Measurement

Databases included the discharge abstract database (CIHI-DAD) and the same day surgery database (CIHI-SDS), which captures all hospitalizations and in-hospital deaths; the Ontario Mental Health Reporting System ( all admissions to a mental health acute care facility); the Ontario Health Insurance Plan database (OHIP) (physician billing data); the registered persons database (RPDB), (all death dates, patient demographics and vital statistics); the National Ambulatory Care Reporting System (CIHI-NACRS), (emergency department visits); and the Narcotic Monitoring System (NMS), (any opioid dispensed from a retail pharmacy in Ontario irrespective of age or insurance coverage). Since July 1, 2012, pharmacist data entry into the NMS is mandatory for all controlled substances.1

Demographics were obtained from the RPDB. Rural residence was defined as a patient who resided in a community with a population of less than 10,000. Income quintile was derived from the median income of the associated neighbourhood in the Canadian census dissemination area. The lowest 20% fell into quintile 1, and the highest 20% in quintile 5.2 Validated algorithms were used to identify patients with congestive heart failure,3 hypertension,4 a history of myocardial infarction,5 diabetes mellitus,6 chronic obstructive pulmonary disease,7 or asthma.8 Standard methods 9 were used to identify Charlson comorbidity score based on ICD-10-CA codes from the CIHI-DAD in the 5 years preceding surgery. Recent benzodiazepine and barbiturate use, identified in the NMS using their respective DINs, was defined as the dispensing of one or more prescriptions in the year prior to the index date. Finally, we identified the proportion of patients who filled a prescription for opioids within 7 (days 0-6) or 30 (days 0-29) days after discharge from surgery using the NMS. Among those who filled an opioid prescription within 7 days of discharge from surgery, we also calculated the duration of the first opioid prescription and the total morphine equivalent dose dispensed. These were calculated based on methods described previously.10

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