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Characteristics of Opioid-Related Deaths in Ontario, Canada: Leveraging the Drug and Drug/Alcohol Related Death (DDARD) Database

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Introduction

Review of post-mortem toxicological results is the gold standard for identifying whether a death is opioid-related. The Drug and Drug/Alcohol Related Death (DDARD) database contains abstracted information from the Office of the Chief Coroner of Ontario, for all opioid-related deaths that occurred in Ontario, Canada between 1991 and 2016.

Objectives and Approach

The DDARD, which contains manner of death and drug concentrations from post-mortem toxicology results for opioids-related deaths in Ontario, was linked to the data repository housed at ICES. The objective of this project was to examine demographic characteristics and the type of opioid contributing to opioid-related deaths in FY2015/16. Individuals identified within DDARD who died from an opioid-related cause were linked to demographic, hospitalization and prescription drug databases to report on age, gender, neighbourhood income quintile, past health services utilization for opioid-toxicity, alcohol use disorders (AUD), mental health emergency department (ED) visits, and opioid(s) present at time of death.

Results

We identified 737 opioid-related deaths in FY2015/16, the majority of which involved men (n=497; 67.4%), those living in lower socioeconomic status areas (n=395; 53.6%), and those residing in urban regions (n=655; 88.9%). Nearly half (n=325; 44.1%) of opioid-related deaths occurred among those aged 45 to 65 years. We found 9.5% (n=70) of individuals had a previous hospital visit for opioid toxicity, 25.4% (n=187) had previously diagnosed AUD, and 42.5% (n=313) had a previous mental health ED visit. Overall, 250 (33.9%) individuals had an active opioid prescription at time of death with oxycodone (n=92; 36.8%) the most commonly dispensed. Among those who didn't have an active opioid prescription at

time of death (n=484; 66%), fentanyl (n=184; 37.8%) was the most commonly found opioid on post-mortem toxicology.

Conclusion/Implications

This project demonstrates how data obtained through chart abstractions can be used to enhance existing administrative health datasets. Given the concern around the safety of opioids, it is important to examine the characteristics and type of opioid(s) involved at time of opioid-related death in order to develop targeted preventative strategies.