Evaluating the Impact of Risk Mitigation Guidance Opioid and Stimulant Dispensations on Mortality and Acute Care Visits During Dual Public Health Emergencies

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BACKGROUND

Context: Risk Mitigation Guidance (RMG) was introduced in March 2020 to support prescribing of pharmaceutical alternatives to unregulated drugs to people at risk of toxic drug poisoning (overdose) in British Columbia, Canada.

Study Objective: Determine the effect of opioid and stimulant RMG prescribing (dispensations) on all-cause and overdose-related mortality and recurrent acute care visits.

Study Design: Retrospective cohort

METHODS

Data Source: linked administrative health data for recipients of RMG opioid or stimulant medications from March 27, 2020 to August 31, 2021.

Method: RMG recipients were matched 1:1 with control groups constructed using high-dimensional propensity score matching.

Marginal structural models, executed on weekly time steps, were used to measure the effect of dispensations on outcomes.

Table 1: Drugs included in the Risk Mitigation Guidance

Drug type	Drug subtype
Opioids	Hydromorphone tablets, M-Eslon (morphine)
Stimulants	Dextroamphetamine (dexadrine), methylphenidate (ritalin)
Benzodiazepines	Diazepam (valium), clonazepam (klonopin)
Alcohol withdrawal	Carbamazepine, clonidine, gabapentin

5,882

- People with opioid use disorder or stimulant use disorder received pharmaceutical alternatives

- Opioid prescribing was associated with a significant reduction in the likelihood of death for people with opioid use disorder

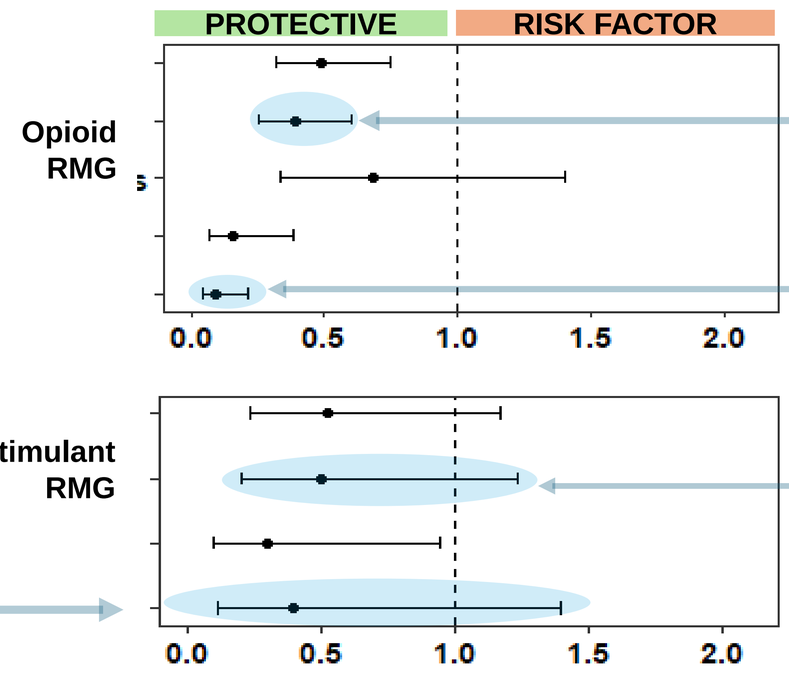
- Lower rate of death from any cause the week after opioid prescription filled

91%

- People who received 4+ days of prescription opioids were 91% less likely to die in the subsequent week

RESULTS

Figure 1. The impact of RMG dispensations on **all-cause mortality**



1 day or more of opioid RMG was associated with a reduction in the hazard of all-cause mortality by 61% (95% CI, *Range*: 46% to 78% risk reduction)

4 days or more of opioid RMG was associated with a reduction in the hazard of all-cause mortality by 91% (95% CI, *Range*: 79% to 96% risk reduction)

4 days or more of stimulant RMG was associated with a reduction in the hazard of all-cause mortality by 61% (95% CI, *Range*: 39% risk reduction to 89% risk increase)

1 day or more of stimulant RMG was associated with a reduction in the hazard of all-cause mortality by 50% (95% CI, *Range*: 80% risk reduction, 23% risk increase)

CONCLUSION

Findings suggest that pharmaceutical alternatives are a promising intervention to reduce overdose deaths among people with opioid use disorder.

LEARN MORE

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