Associations with Prescription Drug Monitoring Programs implementation and opioid prescribing transitions in primary care

Ting Xia[1], Louisa Picco[1], Romi Haas[2], Rachelle Buchbinder[2], Suzanne Nielsen[1]

[1]Monash Addiction Research Centre, Eastern Health Clinical School, Monash University, Australia, [2] School of Public Health and Preventive Medicine, Monash University, Australia

Presenter's email: ting.xia@monash.edu

Introduction: The aim of this study was to evaluate whether voluntary and mandatory use of prescription drug monitoring programs (PDMP) implementation had an impact on individuals' opioid prescription doses and the substitution effects of non-monitored medication prescribing.

Method: This is a retrospective cross-sectional study using routinely collected primary healthcare data. A 90-day moving average opioid dose in Oral Morphine Equivalents (OME) was used to estimate opioid dosage. Pregabalin, gabapentin, tricyclic and carbamazepine were selected as examples of medicines that are commonly used in the treatment of pain but were not currently monitored through the PDMP system. Markov transition matrix was used to describe how patients transitioned between opioid dose groups and treatment options during the control period (01/04/2017 to 31/03/2018), pre-voluntary PDMP 01/04/2018 to 31/03/2019), voluntary PDMP and mandatory PDMP period (01/04/ 2020 to 12/31/2020).

Key Findings: Of existing opioid users in our study, we noted an increase in translation probabilities to no opioids during the mandate PDMP use. However, this increase was attributed mainly to patients switching from low dose prescriptions to opioid discontinued. The doses remained relatively stable for the majority of patients receiving high dose opioid prescriptions. Those who were only on non-monitored medications, during the mandatory PDMP, were less likely to receive opioid treatment but more likely to be remaining in receiving non-monitored medications.

Conclusions: Mandatory PDMP did show a significant impact on patients who received low-dose opioid prescriptions and who only received opioid prescriptions. Long-term evaluation and national-level evaluation are further required.

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