Impact of Prescription Drug Monitoring Program opioid-related emergency department presentations: an interrupted time series analysis

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Introduction: Real-time prescription drug monitoring programs (PDMPs) identify high-risk medicines (e.g. opioids) and medicine combinations via amber and red-flag alerts. Victoria implemented its PDMP in April 2019, and mandated use from April 2020. This study investigated the impact of PDMP on the number of emergency department (ED) presentations due to opioid use disorders.

Method: We analysed the number of opioid use disorders resulting in ED presentations from three large hospital networks in Victoria (Monash Health, Eastern Health and Peninsula Health), from April 2017 to June 2021. Opioid use disorder was defined based on the ICD-10-AM codes: (1) F11.0-F11.9 (opioid related disorders), and T40.0-T40.4, T40.6 (poisoning by, adverse effect of and underdosing of narcotics and psychodysleptics). Interrupted time series analysis was used to quantify the effect of PDMP on the monthly outcomes following voluntary (from April 2019) and mandatory implementation (from April 2020).

Key Findings: There was no significant change in the number of opioid use disorder-related ED presentations following voluntary PDMP implementation and no immediate change in the number of ED presentations due to opioid disorder in was observed in the month of mandatory PDMP implementation. However, there was a sustained decrease in the number of opioid use disorder-related ED presentations following mandatory PDMP implementation (1.8 fewer presentations [95%CI: -3.4, -0.2]).

Conclusions: ED presentations due to opioid use disorders have reduced following implementation of mandatory PDMP use in Victoria. Further investigation will be conducted to examine the effect of PDMP on other ED presentations due to unintentional harms (e.g. suicide and injury).

Disclosure of Interest Statement: *This work is funded by an NHMRC Ideas Grant (#20029193), LP is the recipient of NHMRC Investigator Grant (#2016909),JSB is the recipient of a NHMRC Dementia Leadership Fellowship, RB is funded by an NHMRC Investigator Fellowship (#1194483), DL is the recipient of NHMRC Investigator Grant (#1196892). SN has received untied educational grants to study pharmaceutical opioid related harm from Seqirus, and is a named investigator on an implementation trial of buprenorphine depot funded by Indivior (no funding received by SN personally or through her institution). JSB has received grant funding or consulting funds GlaxoSmithKline*

Supported Studies Programme, Amgen, and several aged care provider organisations unrelated to this work. All grants and consulting funds were paid to the employing institution.

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