

Squeezing the opioid balloon: the need to assess both intended and unintended consequences of policies that target opioid supply but not demand

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The use of prescription opioid medicines in Australia increased dramatically from the 1990s until the late 2010s.¹ While use has declined in recent years, decreasing by 21% between 2015 and 2022,² Australia still ranks eighth in the world in terms of per capita opioid consumption, and opioids remain the leading cause of drug-induced death.^{2,3}

Concerns about opioid use and opioid-related harm have prompted governments and medicines regulators around the world to implement restrictive policies designed to improve the quality of opioid prescribing and mitigate subsequent harms. In Australia, recent policy changes have included the re-scheduling of codeine as prescription-only (February 2018); the establishment of state-based prescription drug monitoring programs (April 2020); and new prescribing restrictions for opioids subsidised by the Pharmaceutical Benefits Scheme (PBS). PBS restrictions include limiting their use for specific indications and, in some instances, requiring prescriptions with an auditable authority code; and subsidising reduced size packs of widely used prescription opioid medicines (June 2020).³⁻⁵ While codeine rescheduling is generally considered to have had positive effects, and was associated with the decline in unintended opioid-induced deaths since 2016,^{3,6} the effects of the latter policies have been mixed. An early evaluation of the Victorian prescription drug monitoring program found no changes in high-dose opioid prescribing following its introduction,⁵ and while prescribing restrictions and smaller pack sizes reduced overall opioid consumption in Australia, their impact on other outcomes, including overdoses and death, are unclear.⁴

Regulators and payers have limited scope for improving the quality of use of medicines, and they rely on relatively blunt tools that target access and supply: prescription drug monitoring programs and prescribing restrictions. These policies do not affect demand for relief from pain or distress and entail risks of unintended consequences — such as switching to other sedative medications to manage opioid withdrawal or distress, and using opioids from illicit sources⁷ — leading to overdoses and deaths caused by these new medicines. Increased demand for addiction and pain services could also follow such policies. Ideally, planning and subsequent evaluations of restrictive opioid policies should consider and capture all downstream consequences.

In this issue of the *MJA*, Nielsen and colleagues present their findings from their investigations of some of the wider effects of recent opioid policy changes in Victoria.⁸ Analysing records from a large general practice data collection, linked with emergency department and hospital admissions data, Nielsen and colleagues found that the rate of opioid-related emergency department presentations declined from June 2020, while the

rate of other substance use-related emergency department presentations immediately increased, before returning to pre-policy change levels by the end of the study period. Rates of emergency department presentations related to mental health or self-harm did not change. Both policy changes were introduced as Australia responded to the COVID-19 pandemic, a response that had a considerable impact on medicine use in Australia.^{4,9,10} Evaluating specific interventions during concomitant external events (eg, pandemics) can lead to spurious results, and it is a strength of the study by Nielsen and colleagues that they included a control group of people not prescribed opioid medicines. The authors could not distinguish between emergency department presentations related to prescription or illicit opioid use, and we do not know who (by age, gender, and opioid dose) was most affected. Nor do we know how these policies affected access to services such as opioid agonist therapy, but the findings are nonetheless reassuring, suggesting that the policies have, at the very least, not increased the frequency of unintended harms.

Robust evaluations of opioid policies in Australia are difficult because of the nature of opioid availability. While the PBS can adjust restrictions for opioids subsidised by the PBS, opioids are also available through non-subsidised (private) and illicit markets. Many medicines researchers rely on PBS data, but their data do not cover non-subsidised opioid dispensing. To capture private market opioid use, sales and prescribing data are increasingly used to investigate opioid use outcomes,^{2,4,5,8} but studies linking these data with health outcomes data, such as that of Nielsen and colleagues, are rare because of the resources required for data linkage.

The study by Nielsen and colleagues was limited to Victoria, and opioid use and opioid related outcomes differ by state and territory. As opioid medicines continue to be of concern, we need national linkages of data on the use of opioids from multiple markets and relevant health outcomes. Such collections will provide better insights into how prescribers and opioid medication users react to policy interventions, facilitating comprehensive evaluations that better inform policies for improving the quality of use of prescription opioid medicines. [Correction added on 8 July 2025, after first online publication: the name 'Neilsen' was changed to 'Nielsen'.]

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- 1 Karanges EA, Blanch B, Buckley NA, Pearson SA. Twenty-five years of prescription opioid use in Australia: a whole-of-population analysis using pharmaceutical claims. *Br J Clin Pharmacol* 2016; 82: 255-267.
- 2 Chidwick K, Bharat C, Gisev N, et al. Trends in prescription opioid analgesic use in Australia from 2015 to 2022. *Int J Drug Policy* 2025; 135: 104666.
- 3 Penington Institute. Australia's annual overdose report 2024. Aug 2024. <https://www.penington.org.au/australias-annual-overdose-report-2024> (viewed May 2025).
- 4 Koch FC, Olivier J, Brett J, et al. The impact of tightened prescribing restrictions for PBS-subsidised opioid medicines and the introduction of half-pack sizes, Australia, 2020–21: an interrupted time series analysis. *Med J Aust* 2024; 220: 315–322. <https://www.mja.com.au/journal/2024/220/6/impact-tightened-prescribing-restrictions-pbs-subsidised-opioid-medicines-and>
- 5 Nielsen S, Picco L, Russell G, et al. Changes in opioid and other analgesic prescribing following voluntary and mandatory prescription drug monitoring program implementation: a time series analysis of early outcomes. *Int J Drug Policy* 2023; 117: 104053.
- 6 McCoy J, Nielsen S, Bruno R. A prospective cohort study evaluating the impact of upscheduling codeine in Australia among frequent users of codeine. *Addiction* 2022; 117: 677–686.
- 7 Nielsen S, Xia TJ. Interventions for reducing the prescribing of pharmaceutical opioids in Australia: are they effectively reducing opioid harm? *Med J Aust* 2024; 220: 311–312. <https://www.mja.com.au/journal/2024/220/6/interventions-reducing-prescribing-pharmaceutical-opioids-australia-are-they>
- 8 Nielsen S, Picco L, Rowland B, et al. Prescription opioid supply-restricting policies and hospital use by people prescribed opioid medications, Victoria, 2018–22: a controlled interrupted time series analysis. *Med J Aust* 2025; 223: 134–140.
- 9 Tang M, Daniels B, Aslam M, et al. Changes in systemic cancer therapy in Australia during the COVID-19 pandemic: a population-based study. *Lancet Reg Health Wes Pac* 2021; 14: 100226.
- 10 Gillies MB, Burgner DP, Ivancic L, et al. Changes in antibiotic prescribing following COVID-19 restrictions: lessons for post-pandemic antibiotic stewardship. *Br J Clin Pharmacol* 2022; 88: 1143–1151. ■