The impact of regulatory changes to pharmaceutical opioid prescribing on opioid mortality in Australia

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Introduction: Increasing pharmaceutical opioid-related harms have prompted significant regulatory change in Australian opioid prescribing. In April 2014, a reformulated oxycodone preparation was introduced; codeine was rescheduled to prescription only in February 2018; and restrictions were introduced (e.g. smaller pack sizes, changes in indications for use) for Schedule 8 (S8) opioid (e.g. fentanyl, oxycodone) preparations in June 2020.

Methods: Using data from the National Coronial Information System from 2001-2024, interrupted time series models were conducted to assess trends in deaths pre-, immediately post-, and at 12- and 24-months post-intervention, by opioid (codeine, oxycodone, fentanyl, heroin). Given high use of several opioids (notably fentanyl, oxycodone, heroin) among some populations, we included several interventions in these models.

Key Findings: ***Codeine deaths*** were increasing significantly, but slowing, pre-rescheduling. Post-rescheduling deaths significantly decreased by ≈20% and ≈37% at 12- and 24- months, respectively. ***Oxycodone deaths*** were increasing significantly (≈35%/year) pre-reformulation; post-reformulation, there was no immediate change, but a non-significant declining trend over time was observed. ***Fentanyl deaths*** were increasing significantly (≈42%/year) pre- oxycodone reformulation; post-reformulation saw significant sustained declines (38.6% at 12-months, 66.2% at 24-months). Further S8 restrictions in 2020 didn't significantly modify the already downward trajectory of fentanyl deaths. ***Heroin deaths*** continued to increase from 2014 to 2020.

Discussions and Conclusions: Codeine rescheduling was highly effective at reducing codeine deaths; there were mixed findings for oxycodone reformulation (no step change in oxycodone deaths but trending down; significant declines in fentanyl deaths), suggesting those using oxycodone were still accessing other formulations. The impacts of the S8 restrictions are difficult to interpret given the COVID restrictions introduced in March 2020. Contrasting trends seen in pharmaceutical opioid (PO) and heroin deaths are consistent with research showing that co-consumption/substitution of heroin and POs is prevalent.

Disclosure of Interest Statement: The National Coronial Information System (NCIS) has been used to source these data, and the Victorian Department of Justice and Community Safety are the organisation facilitating access.