

Changes in opioid prescriptions following codeine rescheduling to prescription only in Australia

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Background

In February 2018, Australia up-scheduled the 'weak' opioid codeine to a prescription only medication. This study aimed to analyse the change in prescribing trends for codeine and other commonly prescribed opioids in Australia following this policy change to determine if removal of over-the-counter (OTC) codeine resulted in an increase in opioid prescribing. One concern expressed was that the removal of OTC codeine would lead to increased prescribing of higher strength codeine or other opioids prescription (McCoy, Bruno, & Nielsen, 2018).

To examine if this concern was realised, this study aimed to analyse the change in Australian national supply of: (i) codeine, and (ii) other common pharmaceutical opioids available in Australia, over a three year period covering the two years leading up to codeine rescheduling in Australia, and the 11 months following.

Method

Data was obtained through the Australian Government Department of Human Services statistics website, and contained monthly data about subsidised national prescription numbers for codeine, oxycodone, oxycodone-naloxone, tapentadol, tramadol, morphine, and fentanyl, from January 2016 – December 2018. Supply was converted to oral morphine equivalent (OME) (Nielsen, Degenhardt, Hoban, & Gisev, 2016), to allow for comparison between differing strength opioids, using information regarding each item codes pack size, strength and administration method with final units in kg/month. Opioids were examined individually, and an aggregated combined opioid variable was created to assess the overall trend in opioid supply. Segmented linear regression accounting for autocorrelation was used to assess the effect of codeine rescheduling on the supply trends of these opioids.

Results

Rescheduling codeine to remove over-the-counter (non-prescription) supply does not appear to have had an immediate effect on the prescription rates of codeine, and there was no significant change in these rates in the months following.

Prescription rates in OME (kg/month) are displayed in Figure 1. No increasing or decreasing trends for codeine or combined opioid supply were observed (Figure 1A and B). A decreasing trend can be seen for most Schedule 8 opioids excepting tapentadol and oxycodone-naloxone (Figure 1D), which appeared to be increasing over time.

No significant changes were seen in the immediate effect on the prescription rates of codeine, or in the months following rescheduling codeine to remove over-the-counter (non-prescription) supply. Similarly, no effect on supply of any other opioid was observed, either immediately after, or in the months following rescheduling, except for tapentadol and oxycodone-naloxone. Immediately after codeine rescheduling a drop in prescription rates of tapentadol was observed (decrease: 3.1 OME kilograms, 95% CI: decrease of 1.01 – 4.93), however there was no long-term effect on the increasing rate of tapentadol prescriptions. Oxycodone-naloxone prescriptions saw a decrease in rate following codeine rescheduling (decrease: 0.71 OME kilograms, 95% CI: decrease of 0.22 – 1.20). **The up scheduling of codeine to prescription only was not associated with an increase any prescribed opioid.**

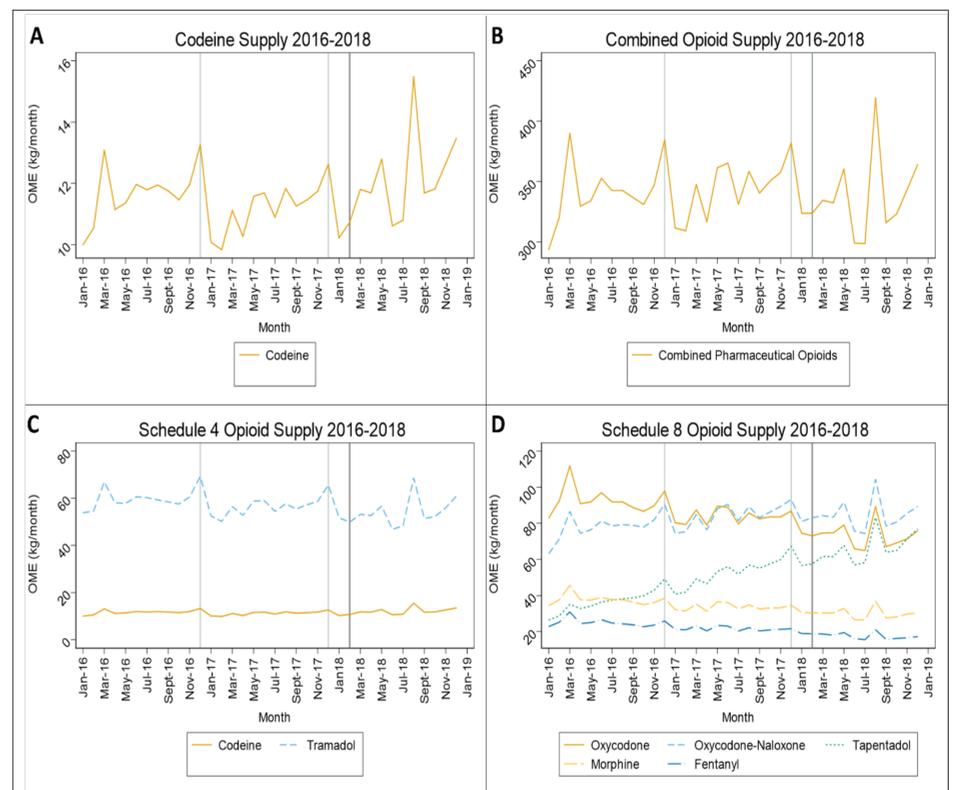


Figure 1 Supply trends for pharmaceutical opioids commonly prescribed in Australia from January 2016 to December 2018. Panels depict the trend in (a) Codeine, (b) all pharmaceutical opioids combined, (c) schedule 4 opioids, and (d) schedule 8 opioids, before and after Codeine rescheduling (February 2018).

Discussion and conclusions

Despite concerns, we saw no evidence of population level substitution with higher strength prescribed codeine or other prescribed opioids. Our findings were consistent with large decreases in codeine sales data following rescheduling, indicating that private (non-subsidised) prescriptions did not increase either. Overall, opioid prescribing in Australia has been decreasing since 2016, both for strong and weak opioids. Research exploring individual-level outcomes is needed to fully understand codeine rescheduling outcomes.

References

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