

Opioid prescribing patterns among medical practitioners in New South Wales, 2013-18

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What knowledge gap does this study address?

International jurisdictions have identified considerable variation in opioid prescribing, with a small proportion of practitioners prescribing a substantial proportion of all opioids. Prescribing behaviour can vary by jurisdiction due to differences in local medicine regulations and policies. We have no population-level data on practitioner-level opioid prescribing behaviour in Australia.

What were our objectives?

To describe the variation in practitioner-level opioid prescribing and to characterise distinct practitioner groups based on opioid prescribing behaviour and patient characteristics.

Methods

Data source: The POPPY II cohort is comprised of all NSW residents who initiated opioids between 2003 and 2018. It includes linked medicines claims, hospitalisation, and mortality registry data.

Study population: All NSW-based medical practitioners who prescribed opioids, 2013-2018 (n=32,876).

Outcomes: Opioid dispensing per prescriber per year measured in oral morphine equivalents (OME mgs)

Clustering (2018 only): We used Partitioning Around Medoids to identify distinct opioid prescriber groups based on their prescribing behaviour and patient characteristics among prescribers with at least 10 patients prescribed opioids.

Opioid prescribing distribution

- The top 1% of medical practitioners prescribed 15% of all OME mgs (Fig 1); this was consistent across years.
- The top 1% of practitioners prescribed a median of 1.4 million OME mgs to 259 patients, while the bottom 50% prescribed a median of 890 OME mgs to 4 patients

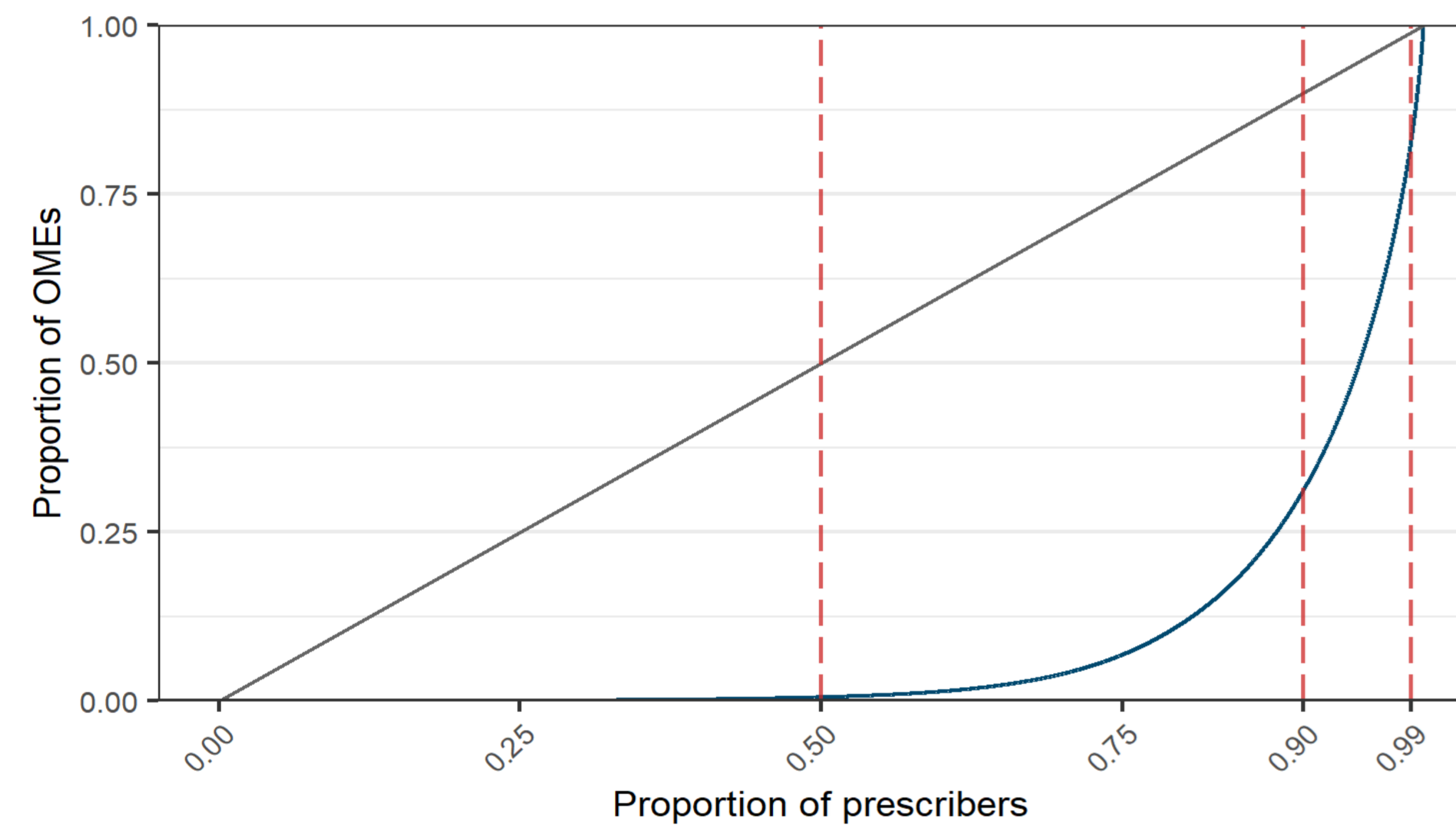


Figure 1. Lorenz curve for opioid prescribing

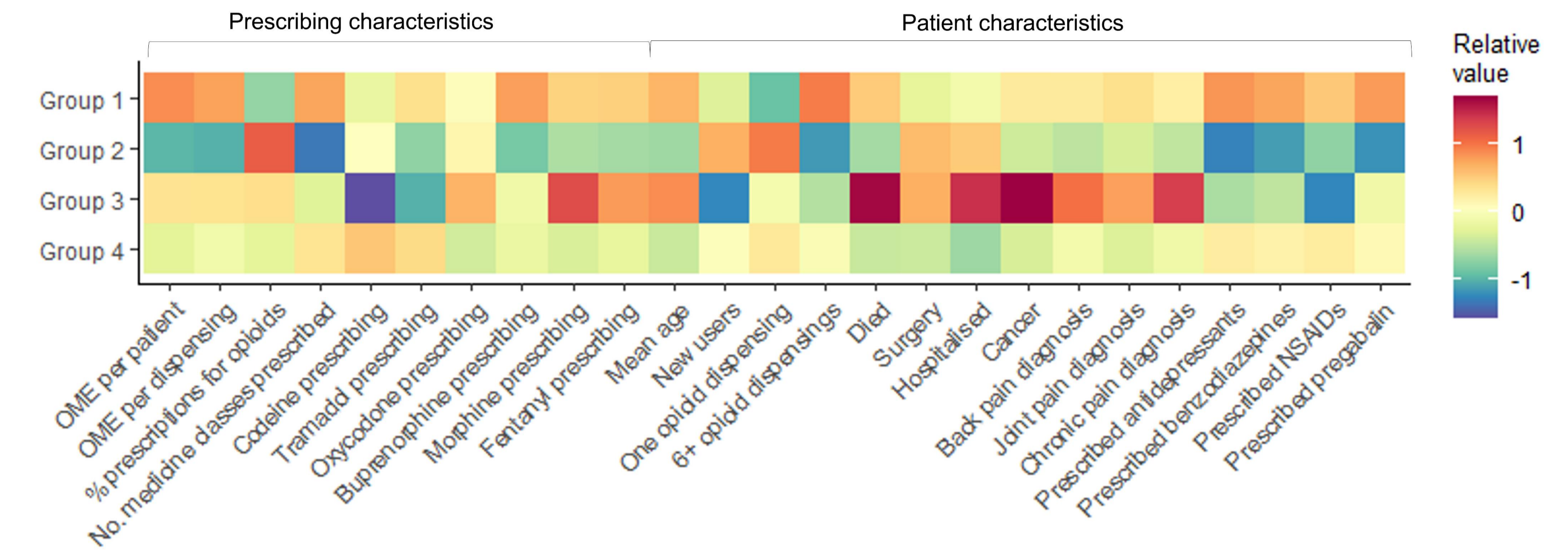
Conclusion and implications

We observed substantial disparity in opioid prescribing that was consistent across the study period. While some variation is warranted, patient characteristics lionly explain part of this variation.

While policies to improve opioid prescribing are often targeted at prescribers, the large volume prescribed by the top prescribers suggests more targeted interventions may be warranted.

Clusters of opioid prescribers in 2018

Figure 2. Relative frequency of measures by prescriber group (red=higher, blue=lower)



- The prescriber group distinguished by older patients with high analgesic use prescribed disproportionately more opioids—both per patient and overall—than other prescriber groups including the group distinguished by high rates of comorbidity/palliative care (Group 3).

Opioid prescriber group	Prescribers, n (%)	Opioid patients, n (%)	Total OME Kgs, n (%)
Group 1: Older patients w/ high analgesic use	5536 (24%)	560,503 (71%)	1,728,896 (77%)
Group 2: Younger patients w/acute opioid use	4013 (17%)	192,214 (24%)	35,024 (2%)
Group 3: High comorbidity and palliative care	938 (4%)	38,407 (5%)	51,680 (2%)
Group 4: Generalist	4387 (19%)	371,692 (47%)	419,752 (19%)
Group 5: <10 patients*	8534 (37%)	29,323 (4%)	19,559 (1%)

*Pre-defined group; due to small number of patients not included in cluster analysis

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