

Longitudinal Patterns of Opioid Dispensing Dosages for Compensated Australian Workers with Low Back Pain: A 3.5-Year Follow-Up Study

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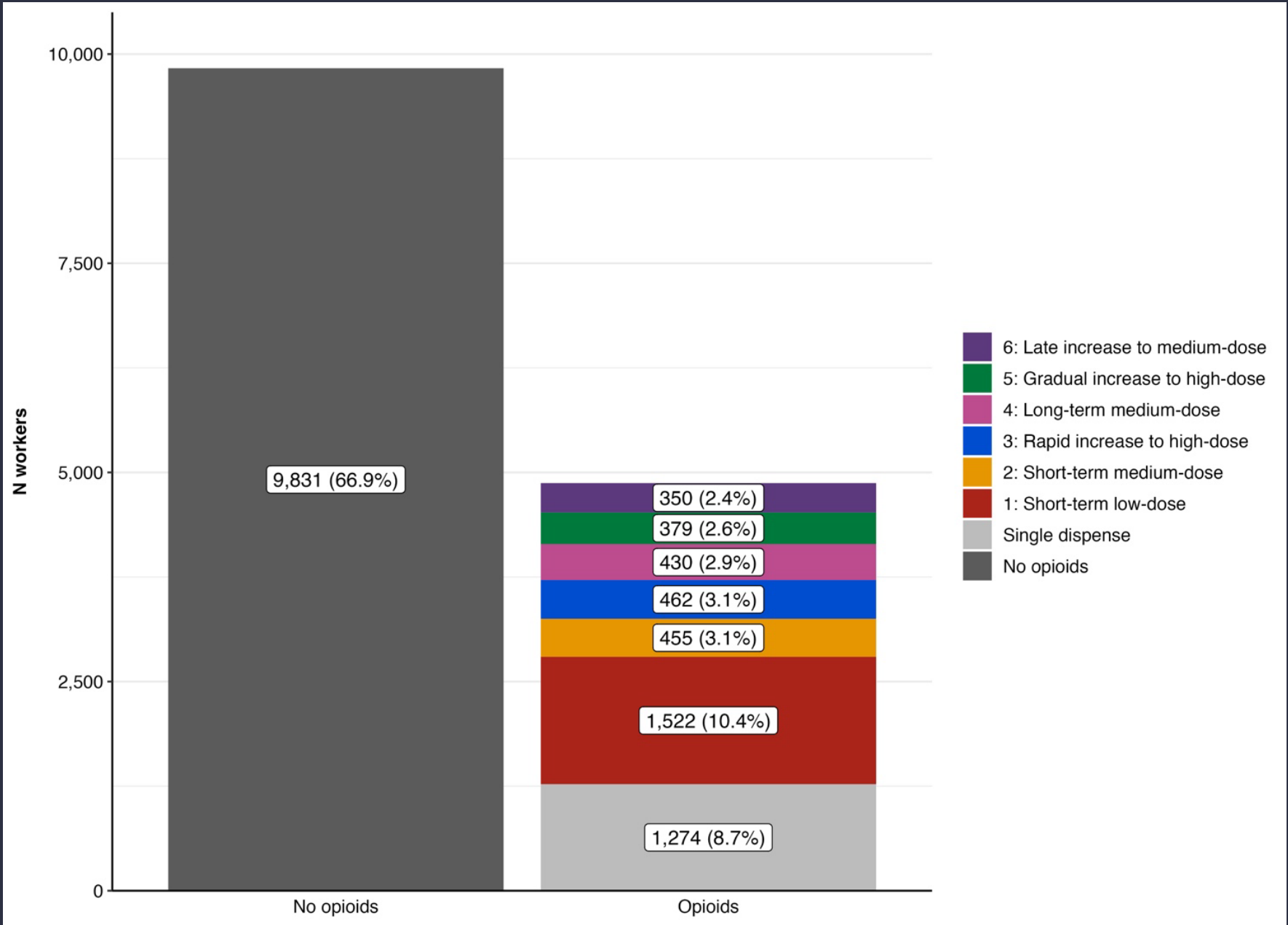


Background

The use of opioids for the treatment musculoskeletal pain, including low back pain has been reported as a significant driver of medical and indemnity expenses in workers’ compensation.

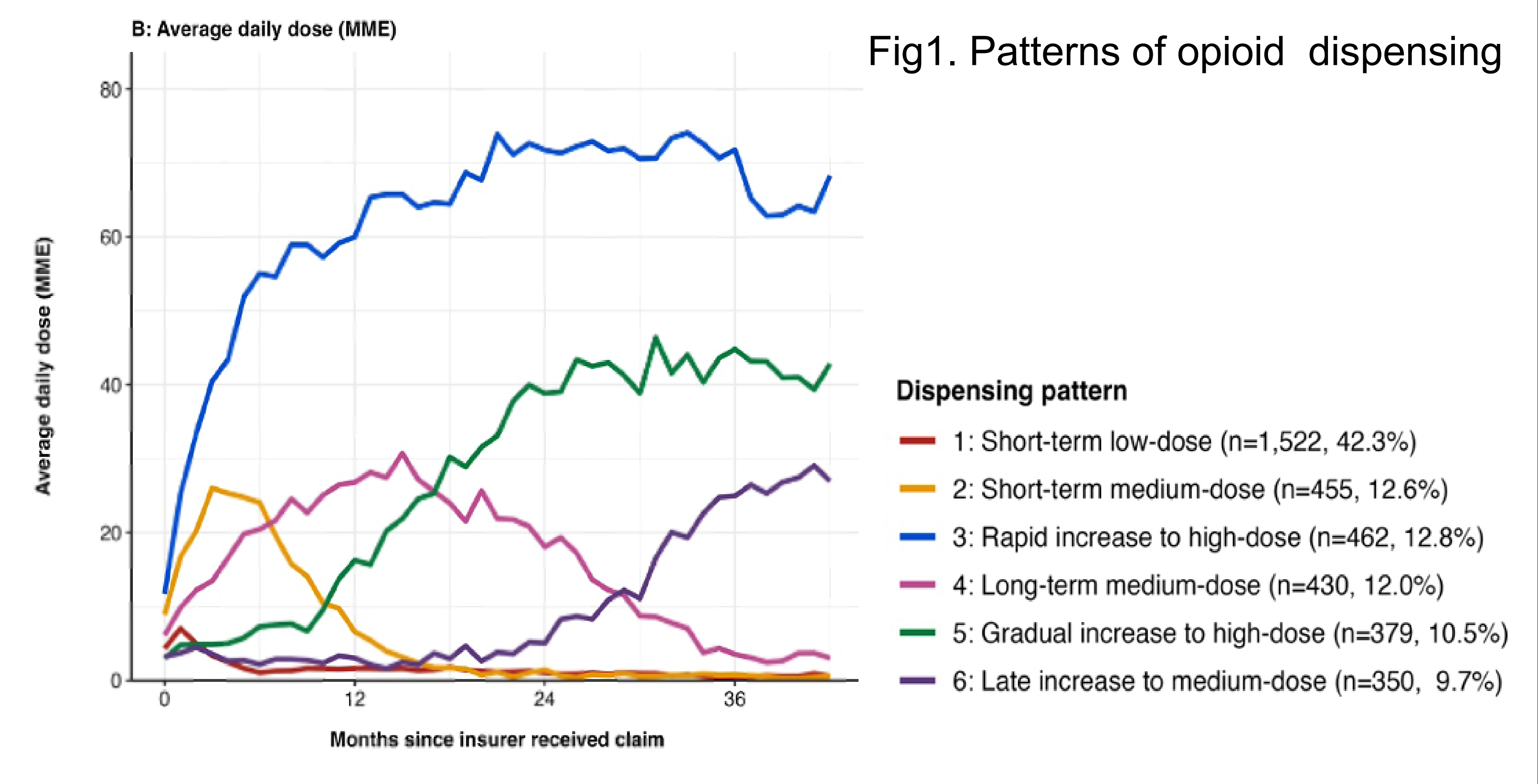
Aims

- Identify longitudinal patterns in opioid dispensing dosages for workers with low back pain (LBP) within a workers' compensation setting.
- Explore the risk factors associated with high-dose and persistent opioid use.



Method

- A retrospective cohort study using workers’ compensation claims data
- K-Means Longitudinal clustering of the total morphine milligram equivalent dose
- A multinomial logistic regression to compare the workers’ characteristics across different opioid dispensing pattern groups



Dispensing patterns	1 st most frequent opioids	2 nd most frequent opioids
Single dispensing	Oxycodone 5mg	Codeine and paracetamol 30mg
Pattern 1: Short-term low-dose	Codeine and paracetamol 30mg	Oxycodone 5mg
Pattern 2: Short-term medium-dose	Codeine and paracetamol 30mg	Oxycodone 5mg
Pattern 3: Rapid increase-high-dose group	Oxycodone 5mg	Codeine and paracetamol 30mg
Pattern 4: Long-term medium-dose	Codeine and paracetamol at 30mg	Oxycodone at 5mg
Pattern 5: Gradual increase to high dose group	Codeine and paracetamol at 30mg	Oxycodone at 5mg
Pattern 6: Late increase to medium dose	Codeine and paracetamol at 30mg	Oxycodone at 5mg

Implications

- One in three compensated Australia workers with LBP use opioids for a long time.
- Lower socioeconomic status, having taken gabapentinoids or antidepressants or having had surgery showed the temporal relationship with the development of long-term opioid use.
- There is a need to identify barriers to non-opioid treatments within the workers' compensation system.



Risk of dispensing higher doses of opioids for long-term use



No significant difference based on **gender**



Increased risk **Dispensed gabapentinoids, or antidepressants**



Decreased risk **Younger age, or higher socioeconomic status**



Increased risk **Surgical procedure within 12-24 months post injury**



No significant difference **Remoteness, employer size, employment type, or occupation**



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