

Mapping the research on prescription drug monitoring programs: a scoping review

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Background

- Prescription drug monitoring programs are a harm minimisation intervention and clinical decision support tool that address the public health concern surrounding prescription drug misuse.
- Despite widespread availability, healthcare practitioner PDMP use varies and has been described as suboptimal.¹
- Barriers to use have been investigated to address uptake and optimise PDMP use.²
- Research on fatal-nonfatal overdose, unintended consequences of PDMP use, and patient outcomes is limited.³

Aim

The aim of this scoping review was to identify the research on prescription drug monitoring programs published between January 2015 and April 2021.

The following main study themes were extracted and mapped:

- Study characteristics and focus
- Barriers and facilitators
- Application to practice
- Areas for further research.

Methods

The scoping review was conducted in accordance with JBI methodology for scoping reviews.⁴

Participants

All participants impacted by a PDMP including patients and healthcare practitioners.

Concept

Any research on PDMPs related to public health, healthcare professionals, patients, clinical practice, and all other areas where these programs are implemented.

Context

Open to all studies including primary and secondary healthcare, inpatient, outpatient, and community settings.

Results

- The PRISMA chart in Figure 1 summarises the search decision process: n = 153.

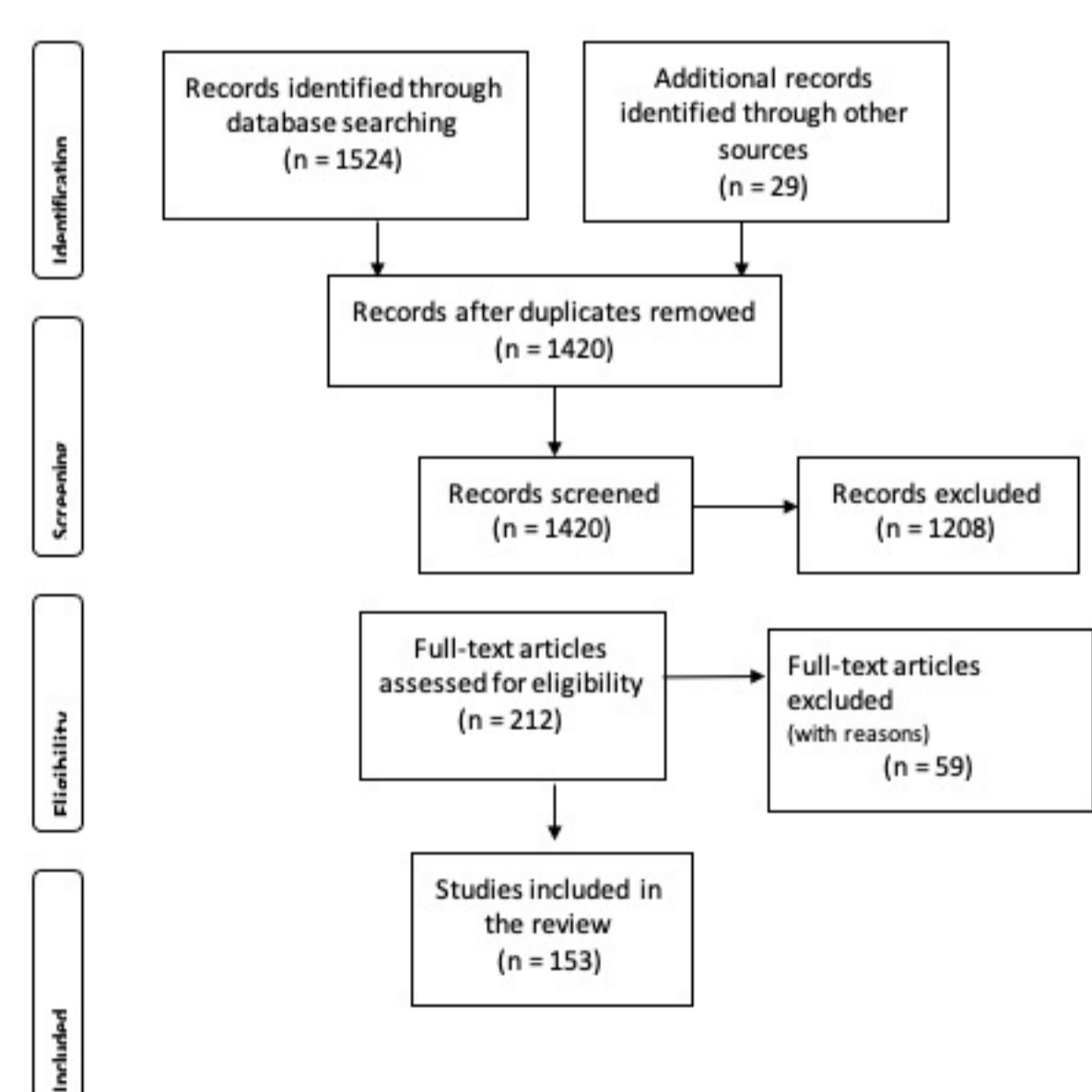


Figure 1: PRISMA flow chart

Search results for prescription drug monitoring programs

References

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The evidence on the effectiveness of prescription drug monitoring programs is mixed, leading researchers to question whether these programs prevent opioid addiction and overdose.

- The majority of the studies were quantitative (70%) and originated from the United States of America (97%).
- Half of the studies involved patients and 47% included healthcare practitioners with some including both populations.
- Figure 2 shows the main research focus areas; Figure 3 shows the study research themes.

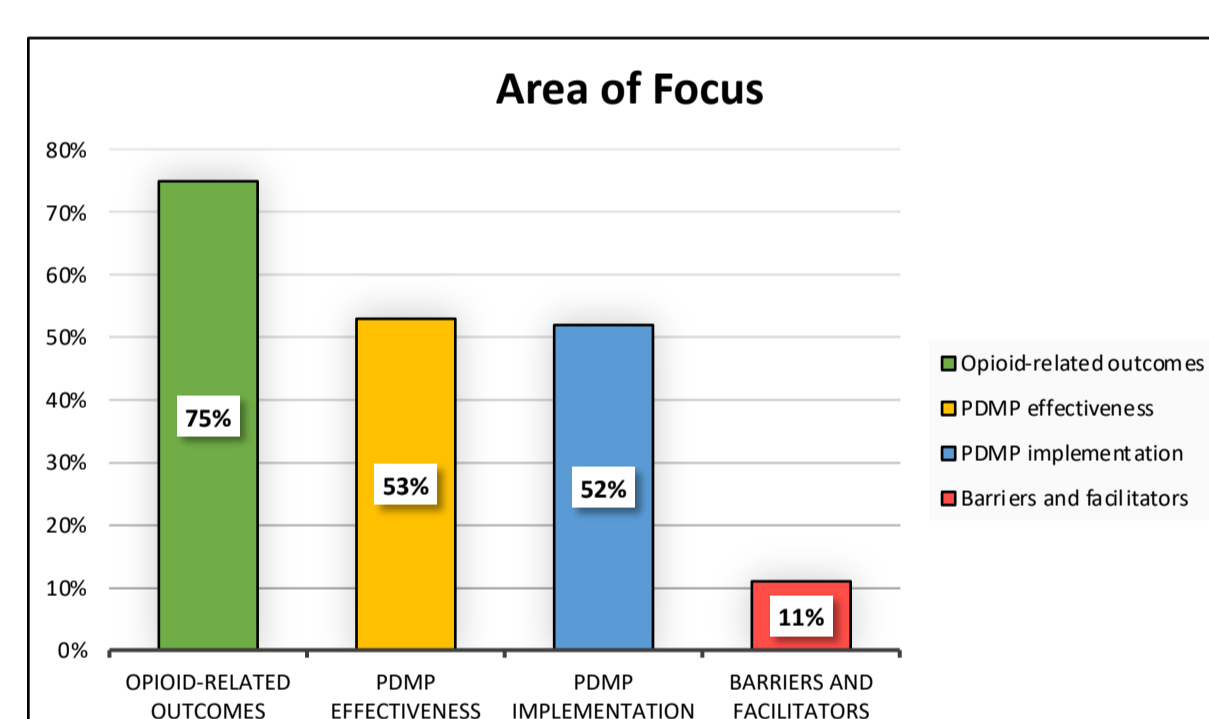


Figure 2: Area of focus in PDMP studies

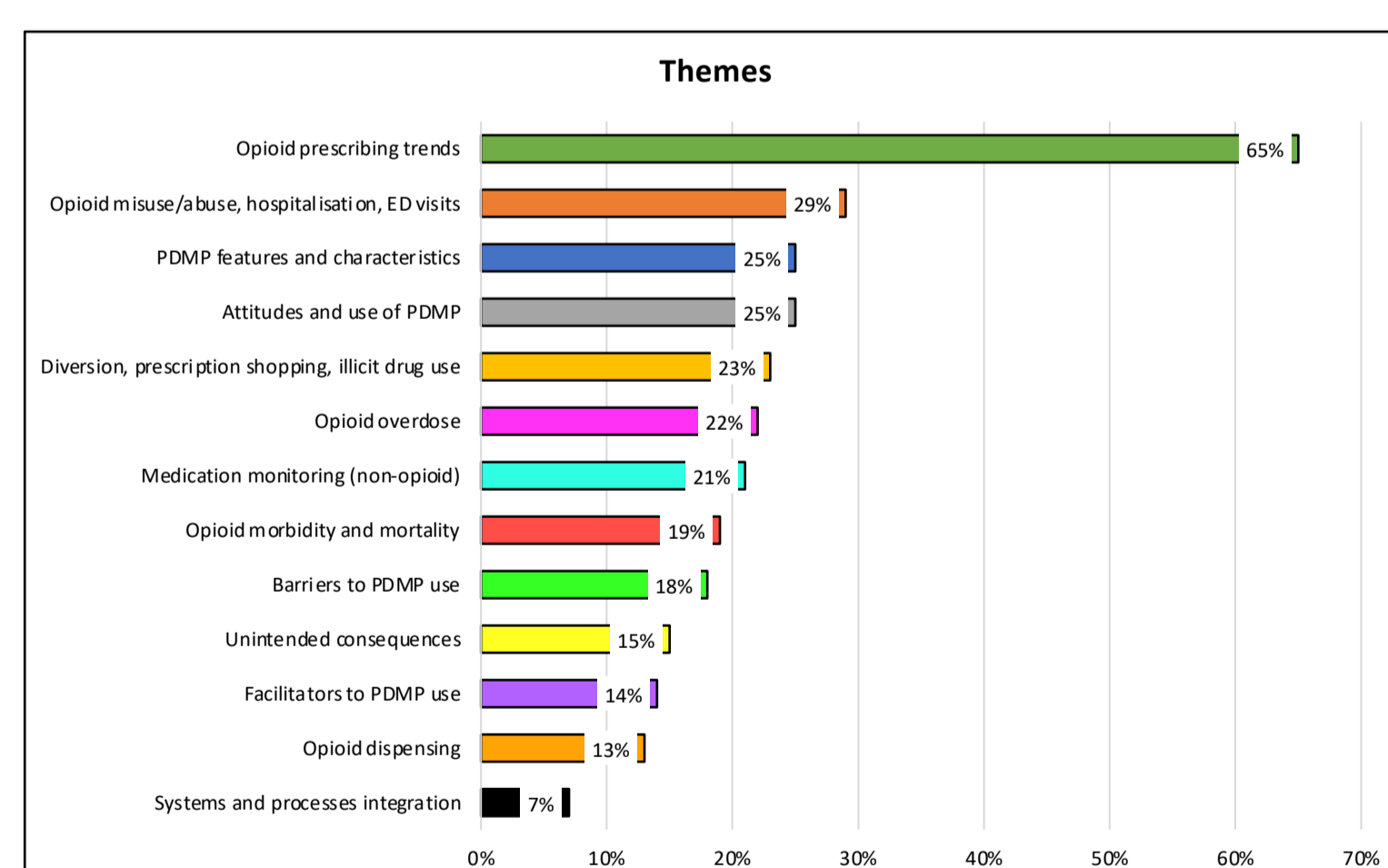


Figure 3: Research themes in PDMP studies

- Barriers to PDMP use are presented in Figure 4.
- Gaps and further research in PDMP studies are presented in Figure 5.

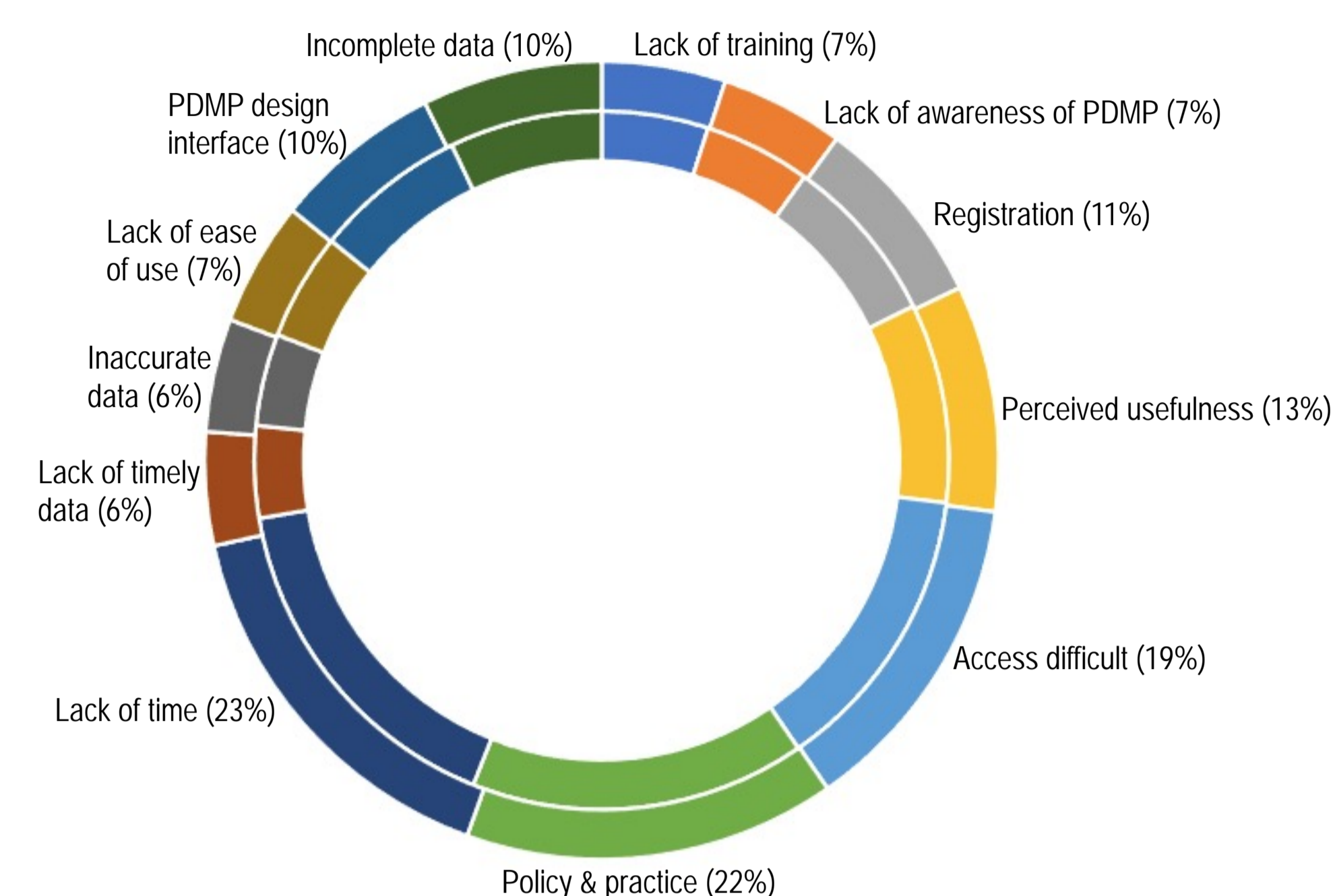


Figure 4: Barriers to PDMP use

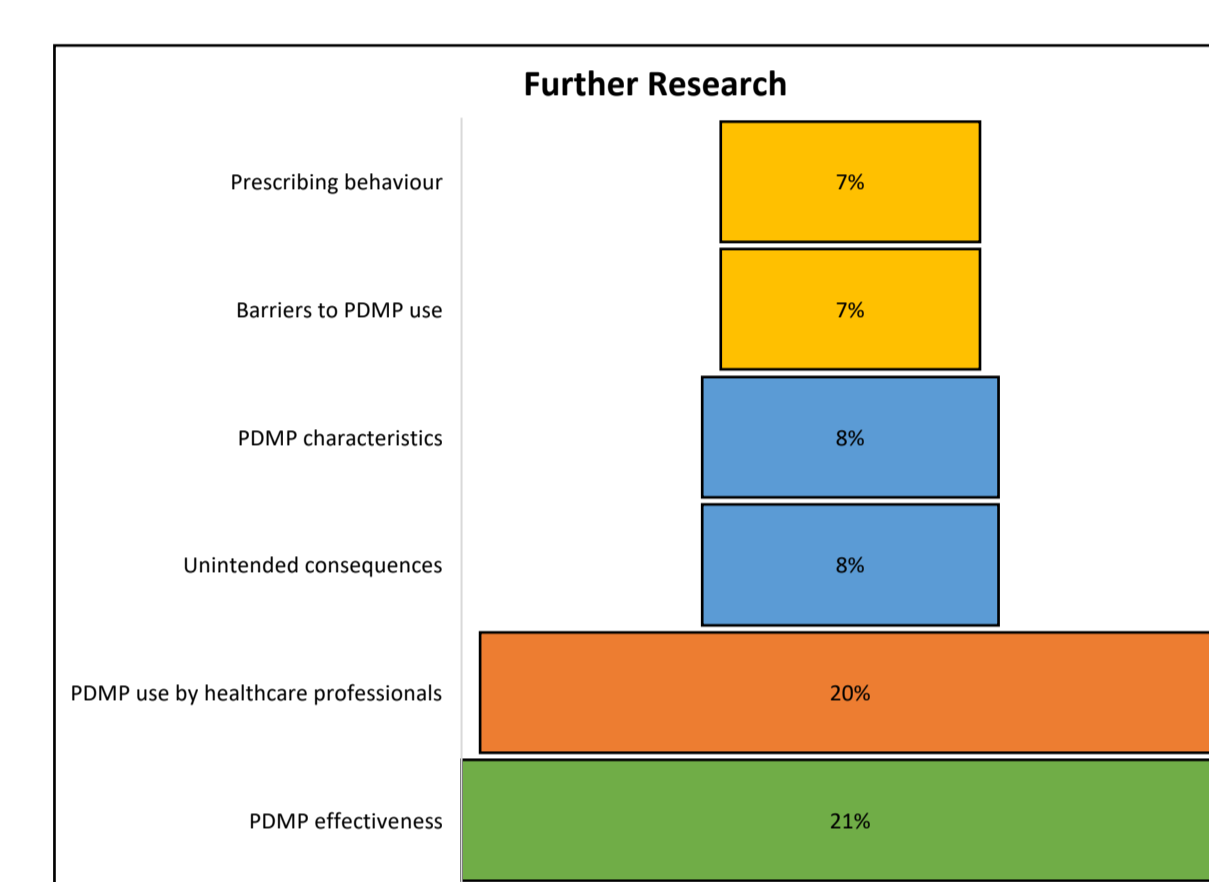


Figure 5: Gaps and further research in PDMP studies

Discussion

- This review revealed a pattern of ongoing and increasing PDMP research in the United States due to the public health opioid crisis and program changes over time.
- There is an upward trend in opioid use and associated mortality in Europe, the United Kingdom and Australia⁵⁻⁸ and clinicians, policymakers, and researchers can learn from the US experience.
- The main area of focus was opioid-related outcomes, predominantly prescribing trends, similarly observed in previous studies used to measure PDMP effectiveness.⁹
- Barriers and facilitators to use were frequently discussed in individual studies, most commonly to provide context and position the research within the current landscape.
- PDMPs are considered a risk mitigation tool used to identify patterns of potential misuse, monitor prescription use, and identify risk factors for adverse events and overdose, as supported by previous literature.¹⁰
- Gaps identified in the research included PDMP effectiveness related to patient outcomes. Research on quality of life, sleep, pain and mental health status are notably lacking. As is research on PDMP use by healthcare professionals related to how they are used and how to optimise their use.

Conclusions

- Results on PDMP effectiveness are mixed and mainly examine their association with opioid-related outcomes.
- This review revealed barriers to PDMP effectiveness related to program use and system integration.
- Further research is needed to improve PDMP use and patient outcomes.