4CPS-273 - DEPRESCRIBING IN THE EMERGENCY DEPARTMENT FOR ELDERLY ADULTS: A SYSTEMATIC REVIEW

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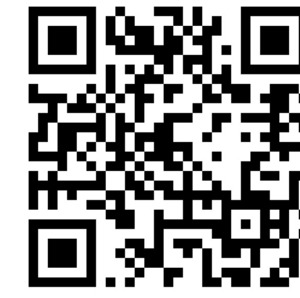

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Background & Aim

Older adults frequently present to emergency departments (EDs) with polypharmacy and high-risk or unnecessary medications, increasing their risk of adverse drug events, falls, and unplanned healthcare utilisation. Deprescribing, defined as the supervised dose reduction or discontinuation of medications, has been described in the literature as a means of optimising medication safety in the ED[1]. Several systematic reviews addressing deprescribing in various settings for different age groups have been identified, yet there is a need to present findings of deprescribing activities for elderly patients in the ED.

Methodology

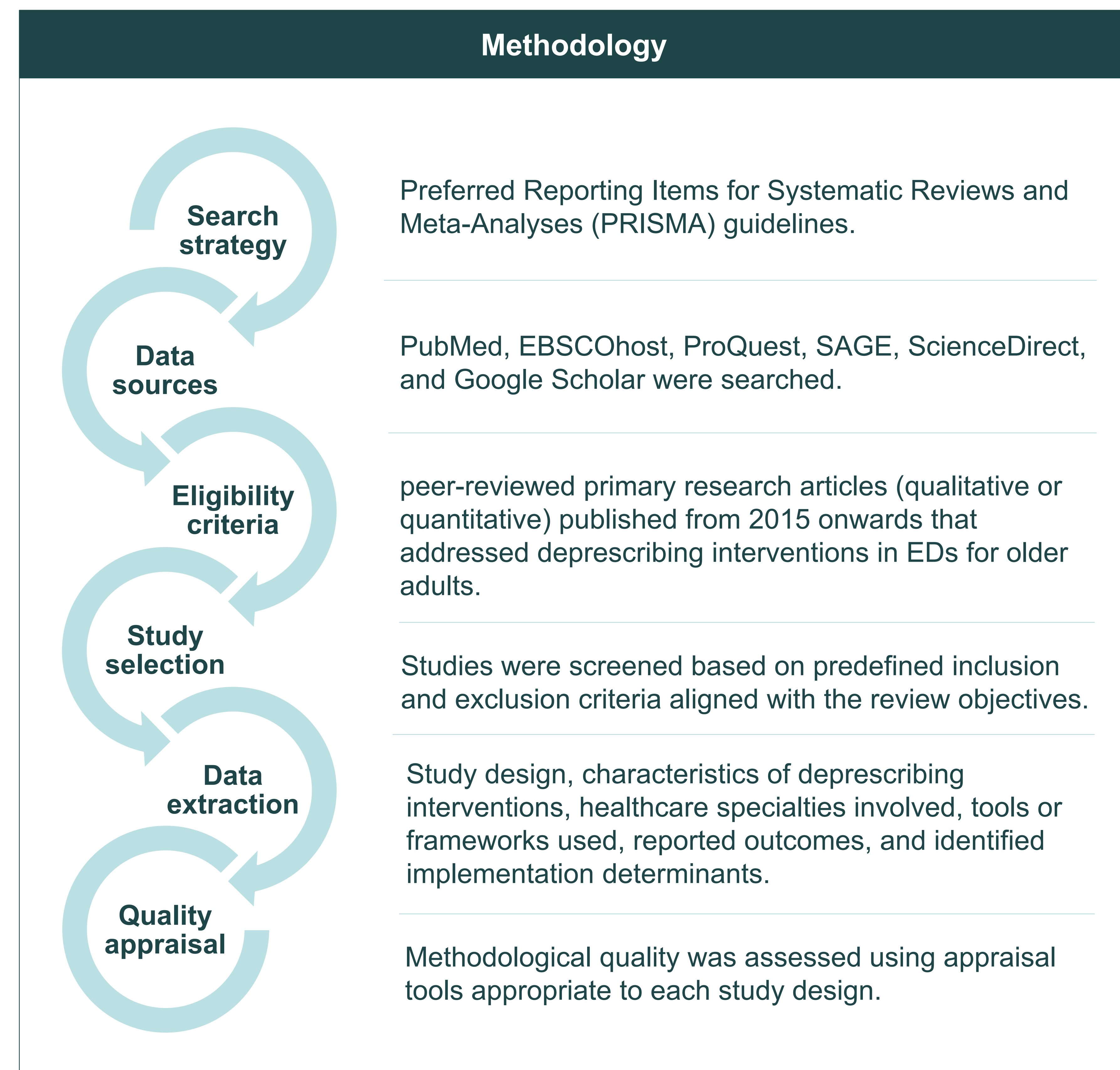


Figure 1: Study demographics (Total 7 studies[2-8] were included in the systematic review)

Results

Table 1: Common Medication Classes Targeted for Deprescribing in the Emergency Department

Medication category	Examples	Identified as PIM/high-risk
Benzodiazepines	Diazepam, lorazepam	✓
Opioids	Morphine, oxycodone	✓
Antidepressants	TCAs, SSRIs	✓
NSAIDs	Ibuprofen, diclofenac	✓
Supplements	Vitamin D, calcium	–

Table 2: Barriers and facilitators influencing the implementation of deprescribing practices in the emergency room

Barriers	Facilitators
• Limited pharmacist availability • Time pressure & ED workflow constraints • Fear of withdrawal or symptom relapse • Poor follow-up / no PCP • Limited clinician confidence or training	• Pharmacist-led medication reconciliation • Multidisciplinary collaboration (ED–PCP) • Use of Beers Criteria & STEADI-Rx • Patient & caregiver education • EHR-supported medication review

Reported outcomes of deprescribing intervention:

Potentially Inappropriate Medications (PIMs)

Increased deprescribing rate:

11.1% → 57.1% *($p < 0.001$)*

Polypharmacy prevalence

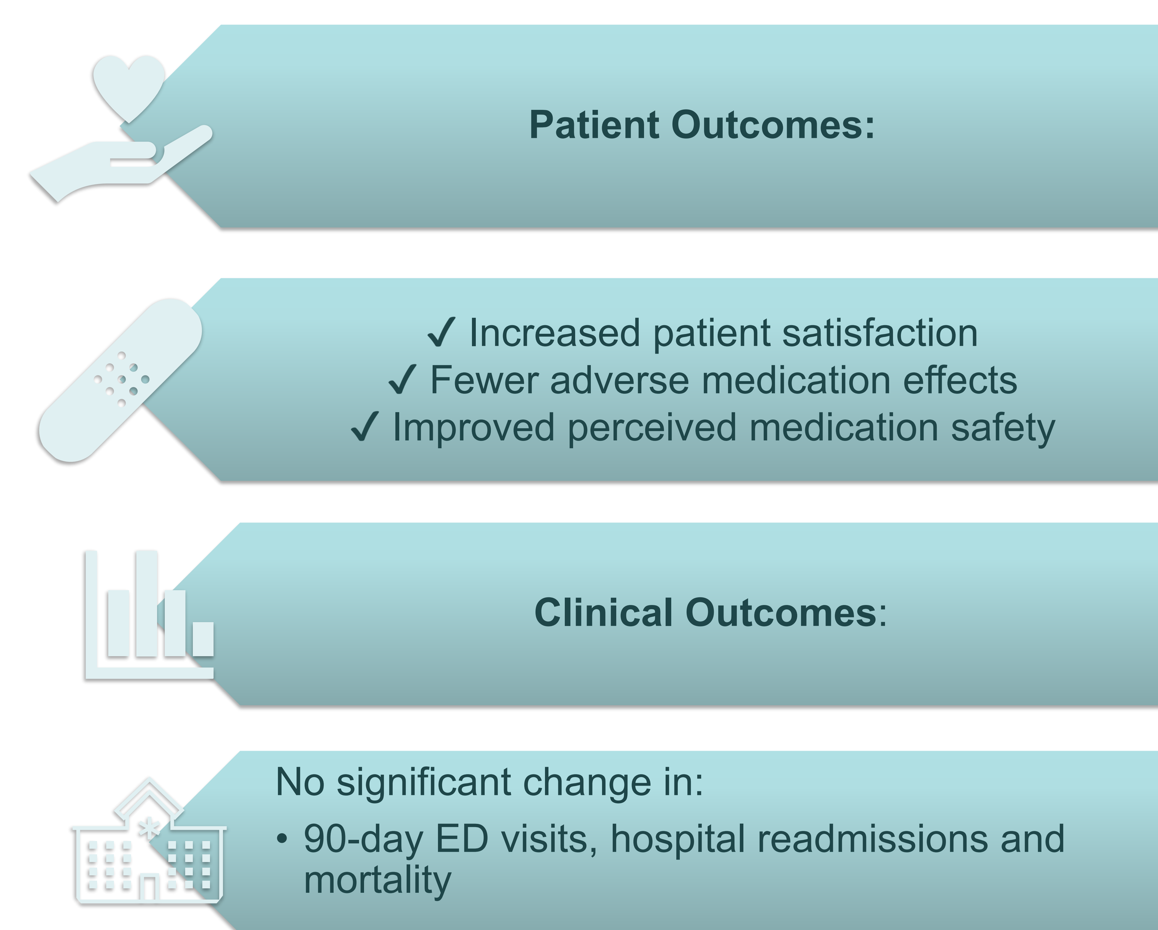
Reduced from **41.7% → 33.3%** *($p < 0.001$)*

Pharmacist impact

43.4% of high-risk medications modified at 12 months

Takeaway: Significant improvement in prescribing quality.

Assessment of the extent of improvement in these outcomes:



Conclusion

ED-based deprescribing is feasible and consistently reduces exposure to PIMs, yet robust evidence for improving clinical outcomes is limited. Described activities were mainly led by pharmacists, supported by validated screening tools, and integrated with primary-care follow-up. There is a need for Large multi-centre studies to determine effects on re-admissions, adverse events, and patient-centred outcomes.

References

1. Maher RL, Hanlon J, Hajjar ER. Clinical consequences of polypharmacy in elderly. Expert Opin Drug Saf. 2014;13(1):57-65. doi:10.1517/14740338.2013.827660.
2. Jovevski JJ, Smith CR, Roberts JL, Dev S, Iloabuchi TC, Gruber EA, et al. Implementation of a compulsory clinical pharmacist-led medication deprescribing intervention in high-risk seniors in the emergency department. Acad Emerg Med. 2023;30(4):410-419. doi:10.1111/acem.14699.
3. Keller MS, Carrascoza-Bolanos J, Breda K, Kim LY, Kennelty KA, Leang DW, et al. Identifying barriers and facilitators to deprescribing benzodiazepines and sedative hypnotics in the hospital setting using the Theoretical Domains Framework and the Capability, Opportunity, Motivation and Behaviour (COM-B) Model: a qualitative study. BMJ Open. 2023;13(2):e066234. doi:10.1136/bmjopen-2022-066234.
4. Lee JW, Hollingsworth EK, Shah AS, Szanton SL, Perrin N, Mixon AS, et al. Emergency department visits and hospital readmissions after a deprescribing intervention among hospitalized older adults. J Am Geriatr Soc. 2024;72(7):2038-2047. doi:10.1111/jgs.18945.
5. Lee S, Bobb Swanson M, Fillman A, Carnahan RM, Seaman AT, Reisinger HS. Challenges and opportunities in creating a deprescribing program in the emergency department: a qualitative study. J Am Geriatr Soc. 2023;71(1):62-76. doi:10.1111/jgs.18047.
6. Reilly C, Buikstra E, Strivens E, Marsden E, Brose J, Craswell A. Multidisciplinary care of older adults in the emergency department to influence deprescribing in older adults: a cohort study. J Pharm Pract Res. 2024;54:125-134. doi:10.1002/jppr.1896.
7. Selman K, Roberts E, Niznik J, Anton G, Kelley C, Northam K, et al. Initiative to deprescribe high-risk drugs for older adults presenting to the emergency department after falls. J Am Geriatr Soc. 2024;72 Suppl 3:S60-S67. doi:10.1111/jgs.18947.
8. Yang HW, Yu CH, Huang TY, Huang CH, Su YJ. Reducing polypharmacy through deprescribing in the emergency department. Medicine (Baltimore). 2025;104(10):e41590. doi:10.1097/MD.0000000000041590.