

Potentially inappropriate medications in residential aged care: prevalence, costs and effects on quality of life

Industry summary of a Flinders University study

The problem

The potential harms of some medications may outweigh their potential benefits. In 2015, the Beers Criteria for potentially inappropriate medications (PIMs) in older adults were updated by the American Geriatrics Society. PIMs include:

- Proton-pump inhibitors, which can have serious adverse effects including bone loss and fractures, Clostridium difficile infection, community-acquired pneumonia and vitamin and mineral deficiencies
- Psychotropics (antidepressants, benzodiazepines and antipsychotics) which are frequently associated with falls, hospitalisation, cardiovascular complications, adverse mental state changes and increased mortality in older adults.

Previous studies have shown high prevalence estimates of PIM use in older adults in residential aged care, despite current recommendations to avoid the use of these medications. This means there is a high financial cost which will increase with the number of people living in residential care.

Study snapshot

Aims:

- To determine the exposure to and costs of PIMs for older adults living in residential care, including those with dementia.
- To examine the association between PIMs and quality of life.
- To identify any differences in exposure to and costs of PIMs between different types of residential care.

Method:

A cross-sectional national study

Results:

- Of all medications dispensed during a 12-month period, 16% were PIMs, costing 18% of all medications or \$411 per person per year.
- Increasing exposure to PIMs was associated with reduced quality of life.
- Participants living in a home-like model of residential care were 52% less likely to be exposed to PIMs compared to those living in a standard model of care.



Suggested improvements

The use of some of these PIMs may be appropriate; however, the high prevalence of use seen in this study raises questions.

- Regular medication reviews and de-prescribing (withdrawal of inappropriate medication) could be appropriate for older adults in residential aged care facilities and improve resident health and quality of life both directly and due to reduction of adverse events

- GPs and pharmacists should work with residential aged-care facilities to complete regular medication reviews and carefully monitor any withdrawal effects
- Reducing even half of the exposure to PIMs in residential aged care could save approximately AUD\$38 million each year across aged care settings in Australia.

- Small-group, home-like environments, which encourage greater independence for residents, may reduce exposure to PIMs and their adverse effects in residential care.



Harrison, S., Kouladjian O'Donnell, L., Bradley, C., Milte, R., Dyer, S., Gnanamanickam, E., Liu, E., Hilmer, S. and Crotty, M. (2018). Associations between the Drug Burden Index, Potentially Inappropriate Medications and Quality of Life in Residential Aged Care. *Drugs Aging*. doi:10.1007/s40266-017-0513-3

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