Improving medicine selection for older people

Do we need an Australian classification for inappropriate medicines use?

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General practitioners manage complex medicine regimens and multiple comorbidities in older people. While medicine use usually leads to benefits for older people, the process of prescribing medicines is becoming increasingly complex.

The quality use of medicines (QUM) is one of the four central objectives of Australia's National Medicines Policy. The National Strategy for the Quality Use of Medicines, launched in 2002, outlines key approaches and principles to achieve QUM.[1] These key principles include appropriate medicine selection, an issue particularly relevant to older people due to their increased susceptibility to adverse drug events (ADEs). There is often limited clinical evidence to guide decisions about which medicines to commence or withdraw in older people. Yet research has continued to identify the widespread and unacceptable economic, clinical and human cost of medicine related harms.[2] In Australia, medicine related hospitalisations account for up to 30% of unplanned admissions among people aged 75 years or older, and 32–77% of these may be preventable.[3]

What is inappropriate medicines use?

Inappropriate medicines use has been defined as that which poses greater risk of harms than benefits, especially when safer alternatives exist.[4] The inappropriate use of medicines can be assessed using either explicit (criterion based) or implicit (judgement based) indicators. Ideally, explicit indicators would be evidence based, predictive of ADEs, identify underuse as well as overuse of medicines, include drug disease interactions, be clinically current, not omit any relevant medicines and be easy to use and flexible across health systems. Since the publication of Beers criteria in 1991,[5] a set of explicit indicators developed for use in nursing homes in the United States, there has been a proliferation of explicit consensus based lists of 'drugs to avoid'. Lists of potentially inappropriate medicines have been developed in countries including Canada,[6] France,[7] Germany,[8] Ireland,[9] Finland[10] and Norway.[11] These lists provide guidance about which medicines or doses to avoid. This represents an advantage over using polypharmacy (ie. number of medicines taken by a patient) as an indicator of potentially inappropriate medicines use. This raises the question of whether Australia needs its own classification for potentially inappropriate medicines use.

Defining inappropriate medicines use in the Australian context

Development of an Australian specific classification for inappropriate medicines use would serve to raise awareness among Australian clinicians. This would be particularly true if it were incorporated into prescribing and dispensing software and endorsed by key national medicines policy stakeholder organisations. Such a classification would have applications beyond general practice as a tool for conducting Home Medicines Reviews and Residential Medication Management Reviews,[12,13] and to guide prescribing by nonmedical prescribers. Given the increasing number of medicine, pharmacy and nursing students, and the limited number of specialists in geriatric pharmacotherapy, such a list would prove valuable in teaching. The development of an Australian specific classification would also overcome several barriers to implementation of an international classification, such as the differences in medicine availability and prescribing culture.

Nevertheless, traditional explicit classifications are not without their limitations. There is an inconsistent or weak association between traditional 'drugs to avoid' criteria and expert assessments of medicine appropriateness.[14] Most explicit approaches do not consider the management of comorbid illness, underprescribing of guideline recommended medicines, drug-drug interactions, or provide recommendations for alternative therapeutic options. There is no convincing evidence that use of Beers criteria medicines is associated with an increase rate in mortality or hospitalisation among nursing home residents, and the association with costs and quality of life in community based settings remains inconclusive.[15] An Australian specific classification would need to be regularly updated as new medicines and evidence becomes available. Explicit criteria do not replace the importance of appropriate knowledge, skill and judgement.

How could we do better?

We advocate new policy driven approaches in which explicit and implicit criteria are combined. These approaches may incorporate indices of inappropriate medicines use that are predictive of clinically significant outcomes for older people (eg. cognitive impairment and physical function).[16] An Australian specific set of indicators combining explicit and implicit criteria has already been proposed.[17] Initial development was based on cross-referencing common reasons older Australians seek or receive healthcare with the 50 highest volume Pharmaceutical Benefits Scheme medicines. However, utilisation to date remains

low, perhaps due to a lack of awareness or stakeholder endorsement. Stakeholder involvement in QUM initiatives is critical to facilitate local uptake by GPs and encourage further research into the effects on health outcomes. Australia may also seek to develop a list of 'preferred medicines for older people' similar to the new World Health Organization list of essential medicines for mothers and children.[18] Finally, we advocate for the wider uptake of evidence based services such as Home Medicines Reviews, which are presently offered to only a fraction of those older Australians who stand to benefit.

The high rates of ADEs and potentially preventable medicine related harms represent a major public health issue among older people. Ongoing monitoring and further research is needed to ensure that new policy driven approaches are up-to-date and evidence based. Such approaches should seek to provide GPs with guidance about which medicines to commence or withdraw in older people. We appeal to clinicians, researchers and policy makers to work together to define and address inappropriate medicines use for older people in the Australian context.

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