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EDITORIAL

Explicit evidence-based prescribing criteria – an important step in achieving quality therapeutics in nursing homes

The human lifespan in the western world has significantly increased over the last century. Associated with an ageing population is a need to better meet the health care requirements of older, increasingly frail people within finite resources. Medication is one of the mainstays to manage a range of conditions more common in older age. Unfortunately, the use of these medicines is not straightforward because older people often have multiple co-morbidities, multiple and sometimes inappropriate medicines, reduced homeostasis, a more unpredictable response to drugs and a deterioration in psychosocial abilities. While we must recognise that prescribing is just one domain of overall health care quality, quality prescribing can lead to better health outcomes for older people. In developing the prescribing criteria reported in this issue, Oborne *et al.* [1] have tackled one of the fundamental barriers to improving prescribing quality for residents of nursing homes, measuring quality. Quality cannot be improved if it cannot be measured.

Improving prescribing quality for older people means reducing irrational and inappropriate prescribing. In the past, criteria defining inappropriate prescribing have been developed by seeking consensus from a panel of recognised experts. This approach was taken by Beers *et al.* [2] when they produced a set of 30 explicit criteria to indicate inappropriate medication use in nursing home residents. When these criteria were later applied to the drug regimens of residents of skilled nursing facilities, 40% of residents were receiving at least one inappropriate medicine and 10% or more were prescribed two or more inappropriate medicines [3]. In this 1991 consensus approach, criteria were drug-oriented and did not take into account the clinical picture. A subsequent revision addressed the drug–disease interaction to some extent [4]. Others have placed greater weight on interpreting medication appropriateness in the light of the clinical picture but do not use explicit criteria [5]. Neither approach has used evidence-based criteria.

A set of evidence-based prescribing quality indicators were developed for elderly medical inpatients by Oborne *et al.* [6]. The paper by Oborne *et al.* [1] in this issue takes the criteria approach to prescribing in nursing homes to this next step, namely developing an evidence-based set of prescribing indicators linking treatment with disease for conditions where evidence of optimal treatment is available. A strength in this approach is that the indicators have been adjusted to recognise the quality of life/end of life reality in nursing homes. Oborne *et al.* [1] modified and successfully applied 13 indicators in 22 nursing homes (934 residents). They suggested that application of the method identified sub-optimal prescribing in nursing homes, giving as one example inappropriate benzodiazepine prescribing.

A finding of inappropriate drug prescribing may not be reflected by actual drug use. In nursing homes, medication use is strongly influenced by nurses and medications are commonly prescribed for administration at the nurses' discretion (prn) [7]. In one study, the prescribed medications temazepam, diazepam and paracetamol were not taken at all by 27%, 44% and 59% of residents [8]. In the Oborne *et al.* study [1], the indicators were applied to the prescribed drug regimen rather than drug regimen actually taken.

While the evidence-based indicators proposed by Oborne *et al.* [1] are a step forward, there is an opportunity to evolve from the present medical model emphasising disease, diagnosis and correction of problems with medicines, to a more holistic approach where the complex and interacting health problems and social needs are more fully recognised. All previous criteria are limited in that prescribing is not generally linked to health outcome. For example, the criteria approach suggests not being on a benzodiazepine is a good outcome, but if a person is not sleeping, and sleep deprivation is making their condition worse, would judicious, short term use of a hypnotic (together with sleep hygiene measures and treatment of any underlying problem, such as pain) be a better outcome and so better quality prescribing? Clearly

such outcome-oriented criteria blur the line between identifying the problem(s) (quality measurement) and defining preferred treatment (as may be defined by a clinical pathway algorithm).

The notions of quality improvement, audit and drug utilisation evaluation are quite widespread in hospitals but less so in the nursing home setting. The optimal implementation of a program incorporating the indicators in nursing homes should be the focus of further development. Oborne *et al*. [1] identified resistance to the audit among some nursing homes and GPs in their study, so that strategies should be developed to overcome this resistance to audit. One strategy would be to promote the value of such audits. Many prescribers focus on the needs and treatment of an individual and rarely stand back to examine the quality of their prescribing for a group of patients. The production of evidence-based criteria as described by Oborne *et al*. [1] is one means by which prescribers can take advantage of quality prescribing that is supported by evidence derived in a clinical setting. For nursing homes, application of the indicators could be the first step in a drug utilisation evaluation program, once the appropriate organisational authority was established through a 'pharmacy and therapeutics' type committee, such as the Medication Advisory Committees established by many Australian aged care facilities.

Indicators of prescribing quality can only contribute to quality improvement if they are used and if they are linked to strategies to correct any problems identified (such as education, medication review or case conferencing). Oborne *et al*. have provided the significant step of evidence-based prescribing quality criteria but there are still other steps to take to improve drug use in nursing homes, in order to achieve quality health outcomes.

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