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Medicines and older people: an accident waiting to happen?

Approximately 140,000 hospital admissions per year may be related to problems with medicines.¹ People aged over 65 years have higher rates of medication incidents as they are the greatest users of medicines and are more at risk of experiencing medicine-related adverse effects. The costs in human and financial terms can be substantial.

Problems faced by older users of medicines

Certain factors predispose individuals to medicine-related problems (see Table 1). Older people are particularly at risk of being exposed to more than one of these factors at any one time, increasing the likelihood of medication misadventure.

Additionally, age-related changes in pharmacokinetics and pharmacodynamics, as well as the risks of polypharmacy, predispose older people to adverse drug reactions (see Table 2).

Not only are older people at greater risk of medicine-related adverse effects, but their recovery from events can be poorer: for example, hip fracture in older people is significantly more likely to end in death or placement in an aged-care facility.²

Table 1: Risk factors predisposing to medicine-related problems³

- Using five or more regular medicines
- Using more than 12 doses of medicine per day
- Significant changes in treatment regimen during the last three months
- Drugs with a narrow therapeutic window or requiring monitoring
- Suspected non-compliance or inability to use therapeutic devices
- Literacy or language difficulties; dexterity problems; impaired eyesight; confusion/dementia
- Attending a number of different doctors
- Recent discharge (in the last four weeks) from a facility/hospital

Older people use considerably more medicines than younger age groups⁴:

Number of medications	45–64 years	65–74 years	75–84 years	85 years or over
Three	14.5%	17.9%	15.9%	20.9%
Four or five	12.7%	20.1%	23.7%	22%
Six or more	6%	13.1%	17%	16.2%

Table 2: Prescribing and medication management issues in older people

- Reduced renal function requiring dose adjustments:
 - due to ageing
 - due to acute illness (e.g. myocardial infarction, urinary tract infection)
- Reduced hepatic metabolism of drugs
- Increased sensitivity to the effect of drugs (e.g. anticholinergics, benzodiazepines)
- Polypharmacy:
 - drug interactions
 - adverse drug reactions
 - over-the-counter and complementary medicines in addition to prescription medicines
 - keeping unwanted or out-of-date medicines
- Poor compliance:
 - complex regimens
 - adverse drug reactions
 - cost of medicines

Using multiple medicines—a user’s perspective

Consumer groups were invited to attend consultations between 1998–2000 aimed at eliciting a medicine-user’s perspective on the problems of managing multiple medicines.⁵ Issues raised included:

- inadequate communication between consumers and health care professionals
- the complex and sophisticated nature of following detailed and specific instructions to use medicines correctly
- insufficient communication or coordination between different sections of the health system, or between prescribers if more than one doctor is seen (e.g. an unclear discharge summary from a hospital requiring a GP to investigate why medications were changed in hospital)
- difficulty accessing important information when needed, including a desire for access to information and advice independent of their regular sources.

A number of solutions have been suggested to minimise the problems of managing multiple medicines. Some of these solutions, and how they are being implemented, are discussed in further detail below.



Prescribing pointers

Improving quality use of medicines in older people in the community

As partnership and cooperation are central to quality use of medicines (QUM), strategies need to involve both health care providers and consumers, the ultimate users of medicines, in an integrated fashion.

Strategies for consumers

Medimate—a tool to help patients understand their medicines

NPS has initiated a consumer-focused program that aims to provide the skills needed to find information about medicines and to reinforce the importance of consumers working with their health care providers (doctors, pharmacists, community nurses). The program reminds people that they need to know about their medicines so they can use them safely and get the most out of them.

Medimate, a brochure developed to assist consumers to gain these skills, highlights:

- that medicines are more than just those prescribed by the doctor
- that lifestyle and other forms of therapy such as physiotherapy and counselling can play a role in improving health
- that consumers themselves should be active partners in choosing medicines by asking questions and getting answers to important aspects of using medicines wisely

- where to get more information (including patient support and self-help organisations) and which sources are credible.

Medimate also provides an opportunity for consumers to list all the medicines they are currently using—the beginnings of a full medication record.

Medimate brochures are available from a range of community outlets, including medical practices and pharmacies, and from the website www.medimate.org.au.

Improving consumer access to information

Knowledge empowers patients to play a more active role in their own health. Consumer medicine information (CMI) is an important tool that provides a patient with information about how to use a particular medicine appropriately. CMI leaflets can be used by health professionals to assist discussions about a medicine with patients. CMI leaflets are available from doctors and pharmacists (through prescribing and dispensing software packages), from pharmaceutical companies directly, or can be downloaded from the NPS website www.nps.org.au.

NPS provides a telephone information service about medicines for consumers called *Medicines Line* (1300 888 763). Approximately 20% of calls to *Medicines Line* in the first 15 months of service were from people aged 65 years and older.

Peer education: by consumers for consumers

Enhancing consumer networks through peer education strategies to promote QUM is a major component of the NPS Community QUM Program. Initially, a partnership with Councils on the Ageing (COTA) National Seniors will see peer educators trained to run activities in their own communities for older people to reinforce how they can get the information they need about medicines.

Strategies for health care providers

Obtain a full medication record

Patients may not tell their doctors about all of the medicines they are using. Reasons for this may include perceptions that over-the-counter or complementary medicines are not medicines, the fear that their doctors may respond negatively, and patients may receive prescribed medicines from more than one doctor.⁵

Obtaining a complete list of your patient's current medicines is a crucial first step to overcoming such problems. One proven technique is the 'brown bag' method where the patient brings in all their medicines enabling these to be reviewed. *Medimate* creates an alternative opportunity for review as it encourages consumers to create their own list of medicines they are using; comparing the patient's generated list against the GP's current list is potentially a real conversation starter!

Home Medicines Review—a thorough going over

A Home Medicines Review (HMR) is available to people living in their homes. Over 40,000 reimbursement claims have been submitted for HMRs conducted to January 2004. An HMR can be particularly useful in older people because of the number of medicines they take: in 2003, 75% of HMRs conducted were in people aged 65 and older.⁶

Evidence from collaborative studies shows programs similar to HMR may result in³:

- improved patient satisfaction, understanding of and accordance with medication regimens
- positive clinical benefits in terms of the patient's health and quality of life
- improved relationships between GP, patient and pharmacist
- reduced health care costs.

A medicines review assesses the appropriateness and ongoing need for therapy, polypharmacy issues such as adverse effects and drug interactions, the dosage regimen and any administration problems, and compliance.

Anyone can request an HMR: the patient; their carer or family member; their pharmacist or community nurse. However, only the GP can initiate the HMR process.* Patients likely to benefit from an HMR will have one or more of the risk factors outlined in Table 1 on page 1.

Following the decision by the GP to initiate an HMR for a particular patient, an accredited pharmacist trained in medication review conducts an interview with the patient, preferably in the patient's home, to discuss the patient's management of their medicines. The report that is produced not only serves as a complete medication record, but outlines potential changes which could improve quality use of medicines, and forms the basis of a 'medication management plan'—an agreed way forward between GP and patient.

In a South Australian study using this model of review, 2,764 potential problems were identified and 42% of the actions recommended were implemented.⁷ For those problems where an action was taken and follow-up data were available, 81% were considered to be 'resolved', 'well managed' or 'improving'.

Practice points when prescribing for the elderly⁸

- Use non-drug treatment whenever possible; do not substitute a drug for effective social care measures.
- Prescribe the lowest feasible dose (often less than half usual adult dose).
- Prescribe the smallest number of medications with the simplest dose regimens.
- Provide simple verbal and written instructions for every medication, including what the medicine is for.
- Be aware that presenting symptoms may be a result of existing medications.
- Regularly review chronic treatment; it may be possible to stop medications or reduce the dose where necessary.

* HMR has its own Medicare Benefits Schedule item descriptor—Item 900—attracting a \$126.10 fee.

Improving quality use of medicines in aged-care facilities

Older people in residential aged-care facilities have many of the difficulties experienced by those in the community, but also encounter problems specific to that environment. The Australian Pharmaceutical Advisory Council's *Guidelines for medication management in residential aged-care facilities*⁹ have noted barriers to quality use of medicines.

Polypharmacy

Using multiple medicines increases the likelihood of adverse drug effects and drug interactions. Medicines causing postural hypotension, balance disorders, cardiovascular insufficiency, blurred vision, or confusion have been linked with an increased risk of falling.^{10,11} Furthermore, drugs are sometimes added to a patient's regimen to counter adverse effects of existing drugs. For example, it is not uncommon to see incontinence due to loop diuretics treated with anticholinergics, rather than looking at whether reducing the diuretic dose is possible.

Excessive use of tranquillisers and psychotropic agents

Psychotropic drugs such as antipsychotics, antidepressants and benzodiazepines are used often for insomnia or behavioural disturbances. These drugs are associated with an increased risk of falls and an increased risk of fractures.¹⁰

Educating nurses and other health professionals about changing sleep patterns, non-drug measures for correcting sleep or behavioural disturbances, and the role of appropriate pharmacological interventions can influence prescribing in these facilities effectively.

These issues will be covered in the June edition of *Prescribing Practice Review* (PPR).

Lack of medication review

Regular medication review is essential to good quality care and should involve collaboration between the medical practitioner, pharmacist, nursing staff, other health

professionals (e.g. speech pathologist, physiotherapist) and the resident and/or carer. Annotate on the medication chart and resident's record that a review has occurred.⁹

Note that aged-care facility patients are not eligible for HMR because they are not community-based.

Administration of medication by untrained or unqualified staff

There is greater potential for medication mishaps when untrained staff administer medicines. The *Guidelines* advise that, where administration will not be performed by a registered nurse or authorised enrolled nurse, the facility should provide medicines in dose administration aids (usually blister packaging or compartmentalised boxes) and only be administered by qualified or suitably trained staff. The Medication Advisory Committee (see below) should ensure standard procedures for administering medicines as well as training and support for all staff participating in medicine administration.

Lack of awareness of specific issues relating to medication use in the aged

Appropriate medication regimens should take into account the issues relevant to prescribing in older people outlined in Table 2 on page 1.

Medication Advisory Committees

Medication Advisory Committees provide a mechanism for a quality improvement and safety framework to facilitate quality use of medicines in residential aged-care facilities. They promote a coordinated approach to common problems such as dealing with sleep and behavioural disturbances, or medicine administration in those unable to swallow. Membership of these committees is cross-functional from all the teams involved including management, general practitioners, nurses, supplying pharmacists and resident advocates as a minimum.

Contributing reviewer

Dr Shanthi Kanagarajah
Geriatrician, Melbourne

Reviewers

Dr James Best, General Practitioner
A/Prof Nick Buckley, Clinical Pharmacologist,
The Canberra Hospital
Ms Jan Donovan, Consumer
Dr John Dowden, Australian Prescriber
Ms Simone Rossi, Australian
Medicines Handbook
Prof John Murtagh, Dept of General
Practice, Monash University, Melbourne
Ms Susan Parker, Australian
Self-Medication Industry

Any correspondence regarding content should be directed to the NPS. Declarations of interest have been sought from all reviewers.

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The information contained in this material is derived from a critical analysis of a wide range of authoritative evidence.

Any treatment decisions based on this information should be made in the context of the individual clinical circumstances of each patient.



National Prescribing Service Limited

Our goal To improve health outcomes for Australians through prescribing that is: ▲ safe ▲ effective ▲ cost-effective
Our programs To enable prescribers to make the best prescribing decisions for their patients, the NPS provides:
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Level 7 / 418A Elizabeth Street Surry Hills NSW 2010

Phone: 02 8217 8700 | Fax: 02 9211 7578 | email: info@nps.org.au | net: www.nps.org.au