



Polypharmacy and Medicines Optimisation

Position Statement

The prevalence of polypharmacy and the inappropriate use of medicines is increasing, raising the risk of treatment-related harms. This document serves to outline the position of the Pharmaceutical Society of New Zealand (PSNZ) on how the specialised skills and knowledge pharmacists have in the optimal use of medicines can be utilised to identify and resolve medicines-related problems.

The optimal use of medicines is identified as one of the three key outcomes of the New Zealand Government's Medicines New Zealand Strategy.⁽¹⁾ The Strategy describes how optimal medicines use activities are crucial to ensuring that medicines are chosen, delivered and used in a way that ensures their potential to improve health and prevent illness is maximised, while high-risk medicines and high-risk situations are identified and strategies enacted to minimise the likelihood of adverse events.

In an ageing population multimorbidity is becoming more prevalent, and the management of multiple chronic illnesses is made more complex when clinical guidelines focus on individual medical conditions, while being derived from evidence that generally excludes older patients and those with comorbidities.⁽²⁾ The result of this complexity is that older people are prescribed multiple medicines for multiple chronic conditions resulting in polypharmacy.

Polypharmacy is a term that is generally used to describe the concurrent use of multiple medicines by an individual, most often defined as 5 or more medicines prescribed concurrently.⁽³⁾ However polypharmacy has also been used to describe the inappropriate or unnecessary use of medicines.⁽³⁾

It is increasingly recognised that the use of multiple medicines can be therapeutically warranted if managed appropriately. However polypharmacy is generally considered as high risk prescribing in older adults due to an increased risk of harm including adverse drug reactions, falls, hospitalisation, institutionalisation and

mortality.⁽⁴⁾ Polypharmacy can also increase the risk of drug interactions, impair medicines adherence and lower the quality of life for patients.⁽⁵⁾

The King's Fund Report into Polypharmacy and Medicines Optimisation⁽⁵⁾ describes polypharmacy as being potentially appropriate or problematic:

Appropriate polypharmacy is defined as prescribing for an individual for complex conditions or for multiple conditions in circumstances where medicines use has been optimised and where the medicines are prescribed according to best evidence.

Problematic polypharmacy is defined as the prescribing of multiple medicines inappropriately, or where the intended benefit of the medicine is not realised.

The concept of potentially inappropriate use of medicines is often reported alongside studies of polypharmacy, and encompasses a range of suboptimal prescribing practices. Inappropriate prescribing of medicines generally refers to: the use of a particular medicine or medicines for which the risks outweigh the potential benefits, the overuse of medicines, prescribing medicines that are likely to be poorly tolerated or increase risk of harm, or the underutilisation of appropriate medicines.^{(6),(7)}

Evidence from New Zealand and Australia has shown that the prevalence of polypharmacy and potentially inappropriate medicines is high, with the prevalence of polypharmacy increasing over recent years - particularly in females, those

over 80 years and in Māori.⁽⁸⁾ Up to three-quarters of older patients being admitted to hospital have been found to be taking five or more medicines, with a fifth taking 10 or more.⁽⁹⁾ Evidence of the high prevalence of polypharmacy and potentially inappropriate medicines extends to both community-dwelling older people and in residential aged-care facilities.^{(3),(10),(11)}

The high prevalence of polypharmacy in residential aged-care raises particular concerns as this population has a higher risk of medicine errors.⁽¹²⁾ This has led to the development of guidance documents focussed specifically on the management and optimal use of medicines in residential aged-care facilities.^{(13),(14)}

Reducing Polypharmacy through Medicines Optimisation

Medicines optimisation encompasses many aspects of improving medicines use, and is fundamental to addressing the challenges posed by polypharmacy.

Medicines optimisation has been described as 'a person-centred approach to safe and effective medicines use, to ensure people obtain the best possible outcomes from their medicines'⁽¹⁵⁾

It requires professional collaboration and evidence-informed decision making about medicines, taking into account the patient's needs, preferences and values. Medicines optimisation can apply to all aspects of the selection, procurement, delivery, prescription, administration and review of medicines, including clinical assessment.

Medicines Optimisation and the Role of Pharmacists

The *Vision 2020 Partnership for Care* joint vision statement between the New Zealand Medical Association (NZMA) and PSNZ acknowledges the specialist skills of pharmacists in medicines management and optimisation, and supports full utilisation of these skills.⁽¹⁶⁾ PSNZ sees this utilisation of pharmacists occurring through the delivery of medicines optimisation services as described in *The New Zealand National Pharmacist Services Framework* (The Framework).⁽¹⁷⁾

The Framework describes Medicines Therapy Assessment (MTA) and Comprehensive Medicines Management (CMM) as two services delivered by pharmacists that focus on optimising the use of medicines. MTA is defined as 'a systematic, patient-centred clinical assessment of all medicines currently taken by a patient, identifying, resolving and preventing medicines - related problems as well as optimising the effectiveness of medicines treatment'.⁽¹⁷⁾

It is a collaborative review where a patient's medicines-related problems will be identified and managed either directly by the pharmacist, or collaboratively with the prescriber.

The MTA service delivered by pharmacists has been shown to be effective in reducing acute hospital

admission in patients aged over 60 living in aged-residential care facilities and is a cost-effective intervention with an estimated return of nearly \$600 per MTA for some patient groups.⁽¹⁸⁾

Our position

With the increasing prevalence of polypharmacy and potentially inappropriate medicines, measures to assess, address and monitor these issues are required urgently. Pharmacists are recognised by the health sector as having the specialist skills and knowledge to optimise medicines.

PSNZ recommends the prioritisation of medicines optimisation services for high risk patients and encourages pharmacists' participation in delivering such services, particularly for those in

residential care facilities and those taking more than 10 medicines.

PSNZ supports the inclusion and delivery of MTA services as an optional service available to General Practice and Primary Health Organisations. Such services could be provided by accredited pharmacists working from community pharmacies, consulting pharmacists contracted specifically and/or by clinical advisory pharmacists employed by practices in a medicines optimisation role.

PSNZ encourages the development of Comprehensive Medicines Management (CMM) services to fully utilise advanced clinical pharmacy practice in the management of complex clinical needs, as part of an integrated healthcare environment.

Recommendations

The Pharmaceutical Society recommends:

- Collaboration between pharmacists and medical practitioners, non-medical prescribers, nursing and allied health professionals in optimising medicines.
- The sustainable delivery of medicines optimisation services by pharmacists as described in the *New Zealand National Pharmacist Services Framework*.⁽¹⁷⁾ Particularly to high risk and vulnerable populations such as Māori, older people, those taking 4 or more medicines and those in residential aged-care.
- The use of evidence-based screening and assessment tools to assess and review the use of multiple medicines such as PINCER⁽¹⁹⁾, STOPP/START⁽⁷⁾, Beers⁽²⁰⁾ or similar protocols aimed at deprescribing.⁽²¹⁾
- The inclusion of pharmacist-delivered medicines optimisation services in strategic planning, health pathways, guidelines and standards of care where ever medicines are used.

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The Pharmaceutical Society of New Zealand (PSNZ) is the professional body representing over 3,000 pharmacists, from all sectors of pharmacy practice. PSNZ provides pharmacists with professional support and representation, training, continuing professional development, and assistance to enable their important role in medicines management and the safe and quality use of medicines.