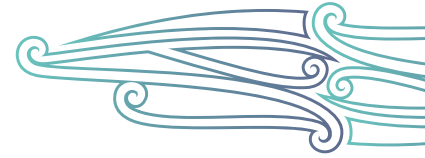


Polypharmacy and deprescribing

Ngā rongoā maha me te whakakore tūtohu



The information in this guide is accurate to the best of our knowledge as of June 2023.

Definition

Polypharmacy is the use of multiple medications. Older people often take many medications to treat conditions, maintain health and prevent future problems. What is important is the effect of the medication rather than the number of medications they use. The aim is always to use medications that benefit the person and eliminate those that may be harmful (Thompson et al 2019).

Deprescribing is the deliberate and systematic act of removing medication and assessing the impact of that change.

Key points

- In aged residential care, regular medication review and associated deprescribing can significantly reduce the number of people with potentially inappropriate medication. It can also reduce the incidents of falling, hospitalisations and overall mortality (Kua et al 2019, 2021).
- As part of the multidisciplinary team, registered nurses make a significant contribution to managing polypharmacy and deprescribing. In particular, they:
 - evaluate and report on resident (and [whānau](#)/family) understanding of the medication regime, medication preferences, challenges with routes of medication administration, potential adverse drug effects and medication monitoring
 - manage the use of ‘as needed’ medications
 - lead the monitoring of residents following deprescribing.

Why this is important

As frailty progresses, physiology, life expectancy and goals of care change. By regularly reviewing medication and then deprescribing where appropriate, health professionals can provide ongoing treatment that best meets the resident’s need.

Implications for kaumātua*

It is important to take a whānau/family-centred approach when changing medication for a kaumātua. This involves actions such as:

- including whānau/family in conversations
- providing opportunities for whānau/family to share their observations and insights and valuing their input
- allowing adequate time to discuss the matters with all parties involved
- thoroughly discussing and explaining the rationale for medication changes.

When conversations go well, whānau/family may use this opportunity to share important, culturally informed interventions. Supporting these wherever possible is vital to providing holistic care.

Assessment

Guidelines to reduce potentially harmful medications generally provide lists of medications to review. Managing these lists is often easier with computer support (Monteiro et al 2019; Thompson et al 2019). The following are some guidelines available for potentially inappropriate medication.

- New Zealand criteria have been developed to identify potentially inappropriate polypharmacy in older adults. New Zealand experts recommend a list of 61 medication indicators that should prompt formal medication review (Liu and Harrison 2023).
- From the United Kingdom, the Screening Tool of Older Persons Prescriptions in Frail adults with limited life expectancy (STOPPFrail version 2) is aimed at older people who have **all** of the following (Curtin et al 2021):
 - limitation with activities of daily living and/or severe chronic disease and/or terminal illness
 - severe frailty
 - the responsible nurse practitioner or general practitioner would not be surprised if the person died within 1 year.
- Beers Criteria (American Geriatrics Society 2019) have an extensive list of medications and associated risks. Many of the medications listed are not available in New Zealand.
- An Australian tool is the Medication Appropriateness Tool for Co-morbid Health Conditions in Dementia (MATCH-D) (Page et al 2016).

* Kaumātua are individuals, and their connection with culture varies. This guide provides a starting point for a conversation about some key cultural concepts with kaumātua and their whānau/family. It is not an exhaustive list; nor does it apply to every person who identifies as Māori. It remains important to avoid assuming all concepts apply to everyone and to allow care to be person and whānau/family led.

Treatment

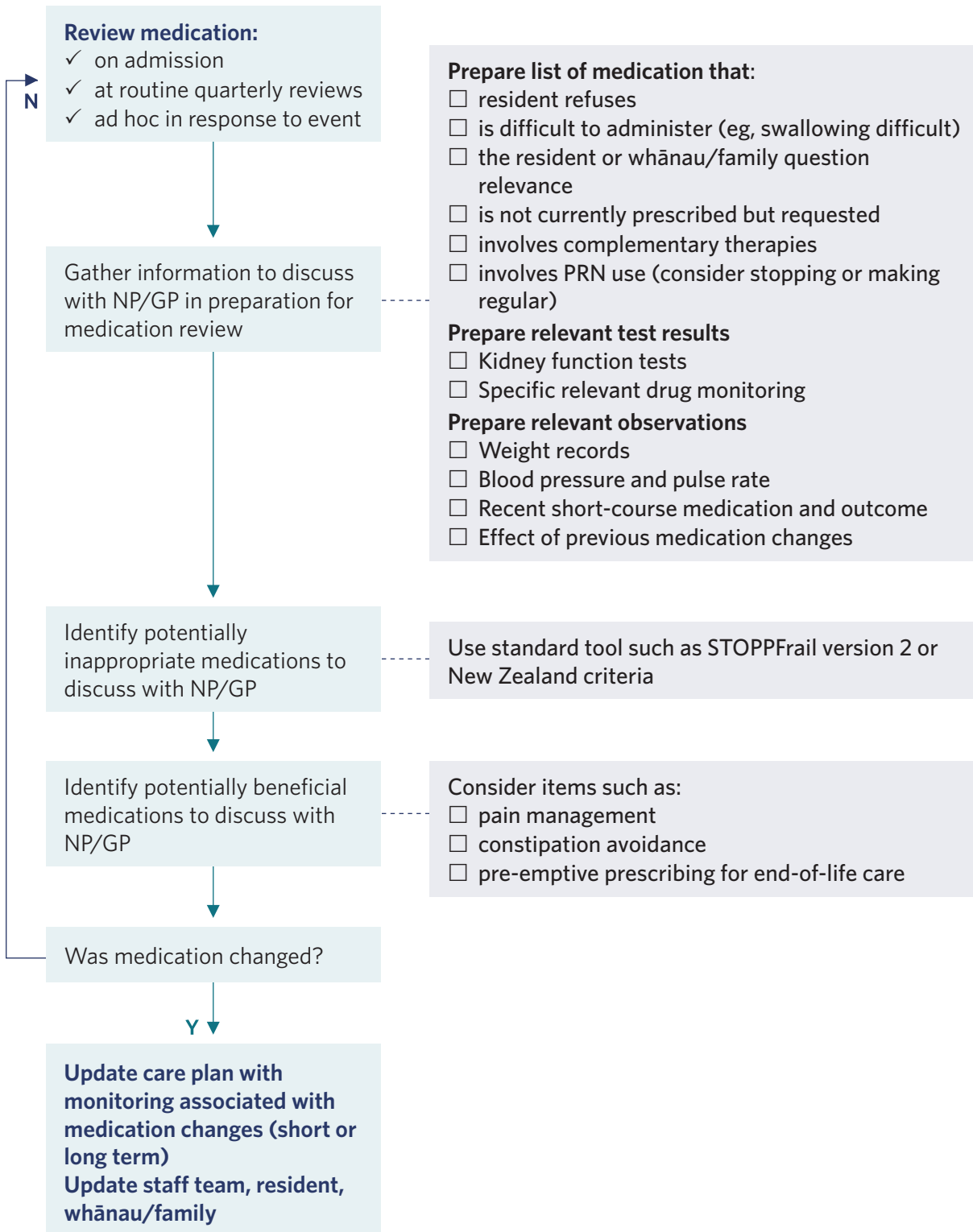
Use a standard tool and nursing observation to identify potentially inappropriate medications and to support deprescribing practice.

Medications to consider (adapted from STOPPFrail version 2; Frailty Care Guide 2019)

Medication	Reason to deprescribe	Reason to continue
Cardiovascular system		
Lipid lowering: statins, eg, atorvastatin	<ul style="list-style-type: none"> • Need long duration to be of benefit • Muscle weakness and falls 	<ul style="list-style-type: none"> • Life expectancy > 5 years • Stroke in last 2 years • Peripheral vascular disease where symptoms improve on statin
Antihypertensive	<ul style="list-style-type: none"> • Falls or dizziness • Postural hypotension • If systolic blood pressure is consistently less than 130 mmHg 	<ul style="list-style-type: none"> • History of stroke • Treatment of cardiac disease other than hypertension, eg, treating arrhythmia, myocardial infarction or heart failure
Coagulation system		
Antiplatelets	<ul style="list-style-type: none"> • Using for primary prevention only • Using aspirin for stroke prevention in atrial fibrillation 	
Central nervous system		
Antipsychotic in dementia, eg, haloperidol, risperidone	<ul style="list-style-type: none"> • After using for 12 weeks and behavioural and psychological symptoms of dementia (BPSD) are controlled • After using for 12 weeks and BPSD unchanged • Monitor reducing dose regime 	<ul style="list-style-type: none"> • Long-term mental health disorder • Treatment for acute delirium • BPSD when withdrawal fails or symptoms relapse
Sedatives or hypnotics, eg, lorazepam, zopiclone	<ul style="list-style-type: none"> • Increase memory problems in cognitively impaired, cause daytime sedation • Monitor reducing dose regime 	
Gastrointestinal system		
Proton pump inhibitors, eg, omeprazole	<ul style="list-style-type: none"> • Had full therapeutic dose for > 8 weeks • Mild reflux that can be managed with antacids • Monitor for 4-12 weeks after stopping (for non-verbal residents, monitor behaviour) 	<ul style="list-style-type: none"> • Severe oesophagitis or history of gastric bleed • Recurrence of symptoms

Medication	Reason to deprescribe	Reason to continue
Musculoskeletal system		
Osteoporosis treatment	<ul style="list-style-type: none"> No short-term benefits Had full therapeutic treatment Unable to manage administration 	<ul style="list-style-type: none"> Fragility fractures and evidence of benefit
Calcium supplement	<ul style="list-style-type: none"> No short-term benefits Adds cardiovascular risk 	
Non-steroidal anti-inflammatory drugs (NSAIDs)	<ul style="list-style-type: none"> Increased risk of major side effects (peptic ulcer disease, bleeding, worsening heart failure) when taken regularly for > 2 months Renal impairment 	<ul style="list-style-type: none"> The only effective medication for arthritic pain, and risks evaluated and understood
Oral steroids	<ul style="list-style-type: none"> Increased risk of adverse effects when taken long term (consider reduction if unable to deprescribe) 	<ul style="list-style-type: none"> Worsening underlying disease with withdrawal
Urogenital system		
Drugs for overactive bladder, eg, solifenacin	<ul style="list-style-type: none"> If incontinence persistent despite treatment 	<ul style="list-style-type: none"> Clear history of painful detrusor hyperactivity
Drugs for benign prostatic hyperplasia, eg, doxazosin	<ul style="list-style-type: none"> In males with long-term catheters 	
Endocrine system		
Antidiabetic oral agents	<ul style="list-style-type: none"> Aim for monotherapy Less stringent control (HbA1c up to 70 mmol/mol) 	
Miscellaneous		
Multivitamins and supplements	<ul style="list-style-type: none"> Stop if only used for prophylaxis 	<ul style="list-style-type: none"> Support cachexia, or wound healing
Antispasmodics	<ul style="list-style-type: none"> Not for regular use 	<ul style="list-style-type: none"> Frequent relapse of colic symptoms
Prophylactic antibiotics	<ul style="list-style-type: none"> No firm evidence of ability to prevent recurrent cellulitis or urinary tract infection 	
Others	<ul style="list-style-type: none"> Any medication without clear clinical indication or symptom now resolved 	

Decision support



GP = general practitioner

NP = nurse practitioner

PRN = 'as needed' (pro re nata)

References | Ngā tohutoro

American Geriatrics Society. 2019. American Geriatrics Society 2019 updated AGS Beers Criteria® for potentially inappropriate medication use in older adults. *Journal of the American Geriatrics Society* 67(4): 674–94. DOI: 10.1111/jgs.15767. (For quick access, go to: www.hqsc.govt.nz/our-work/system-safety/reducing-harm/medicines/projects/appropriate-prescribing-toolkit/tools-to-guide-which-medicines-should-be-considered-for-deprescribing/#sec1.)

Curtin D, Gallagher P, O'Mahony D. 2021. Deprescribing in older people approaching end-of-life: development and validation of STOPPFrail version 2. *Age and Ageing* 50(2): 465–71. DOI: 10.1093/ageing/afaa159.

Kua C-H, Mak VSL, Huey Lee SW. 2019. Health outcomes of deprescribing interventions among older residents in nursing homes: a systematic review and meta-analysis. *Journal of the American Medical Directors Association* 20(3): 362–72.e11. DOI: 10.1016/j.jamda.2018.10.026.

Kua C-H, Yeo CYY, Tan PC, Char CWT, et al. 2021. Association of deprescribing with reduction in mortality and hospitalization: a pragmatic stepped-wedge cluster-randomized controlled trial. *Journal of the American Medical Directors Association* 22(1): 82–9.e3. DOI: 10.1016/j.jamda.2020.03.012.

Liu L, Harrison J. 2023. Development of explicit criteria identifying potentially inappropriate polypharmacy in older adults in New Zealand primary care: a mixed-methods study. *Journal of Primary Health Care* 15(1): 38–47. DOI: 10.1071/HC22135.

Monteiro L, Maricoto T, Solha I, et al. 2019. Reducing potentially inappropriate prescriptions for older patients using computerized decision support tools: systematic review. *Journal of Medical Internet Research* 21(11): e15385. DOI: 10.2196/15385.

Page AT, Potter K, Clifford R, et al. 2016. Medication appropriateness tool for comorbid health conditions in dementia (MATCH-D). *Internal Medicine Journal* 46(10): 1189–97. URL: www.ncbi.nlm.nih.gov/pmc/articles/PMC5129475/pdf/IMJ-46-1189.pdf.

Thompson W, Lundby C, Graabaek T, et al. 2019. Tools for deprescribing in frail older persons and those with limited life expectancy: a systematic review. *Journal of the American Geriatrics Society* 67(1): 172–80. DOI: 10.1111/jgs.15616.