

GENERAL INFORMATION

KEY POINTS

- Modern medications have had a major impact on survival and symptom reduction from a range of medical conditions, and clinical guidelines for the management of the majority of common medical conditions are available.
- In patients with multiple morbidities, applying the relevant guidelines may result in a significant medication load.
- The higher the medication load, the more likely that an adverse effect will occur as a result of interactions between the medications and the multiple conditions.
- Over a 5 year period, one in four older people are hospitalised for medication related problems.¹
- In addition, patients with low resilience (typically older, frailer patients) may have undesirable outcomes from the indiscriminate use of clinical guidelines.²
- In particular, patients who are frail are more likely to have adverse effects from medication. Frailty has been defined as three or more of: unintentional weight loss, exhaustion, weakness, slow walking, low physical activity and accumulation of medical, functional or social deficits.³

A PERSONALISED APPROACH

- 1 CONSIDER THE PATIENT**
 - Assess the person's life expectancy and degree of frailty.
 - What are the person's goals and expectations?
- 2 CONSIDER THE MEDICATIONS**
 - What medication is the person taking (including prescription, over-the-counter, vitamins and herbal preparations)?
 - Why are they taking them (including dose, frequency and duration)?
 - Are there any adverse effects or possible interactions (drug-drug or drug-disease)?
- 3 IDENTIFY POTENTIAL DRUGS TO BE CEASED/MODIFIED**
 - Consider the risks and benefits for individual drugs with particular attention to high risk drugs and those originally prescribed for disease prevention which may no longer be relevant/needed.
 - Prioritise drugs to establish which could be appropriately deprescribed.
- 4 PLAN AND INITIATE WITHDRAWAL TRIAL**
 - Discuss with and seek consent from patient/carer explaining rationale and steps to take if symptoms recur.
 - Develop a withdrawal plan with appropriate tapering of one medication at a time.
 - Inform other health professionals involved of rationale and tapering plan.
- 5 MONITOR AND SUPPORT**
 - Monitor progress with person with consideration of adverse effects or return of symptoms.
 - Review plan with patient and ask for feedback.
 - Document result of withdrawal process and move on to next medication if appropriate.

PRINCIPLES

Deprescribing has been described as the systematic process of identifying and discontinuing potentially inappropriate drugs with the aim of minimising polypharmacy and improving patient outcomes.⁴ The term can also be considered more broadly, taking in the concept of minimisation and reduction of medication “load” in terms of dose and/or number of tablets/administration times.

Cessation of medication may be an appropriate action in certain clinical situations amongst older adults. Drug cessation should be considered in patients with an increased frequency of falls, with delirium and/or cognitive impairment and in end-of-life situations.⁵

Drug cessation should also be considered in all patients as a part of regular medication review. Scott et al. identified a hierarchy of utility of medications that assists in determining the strength of the current indication of a medication.¹

In order of decreasing utility they suggested:

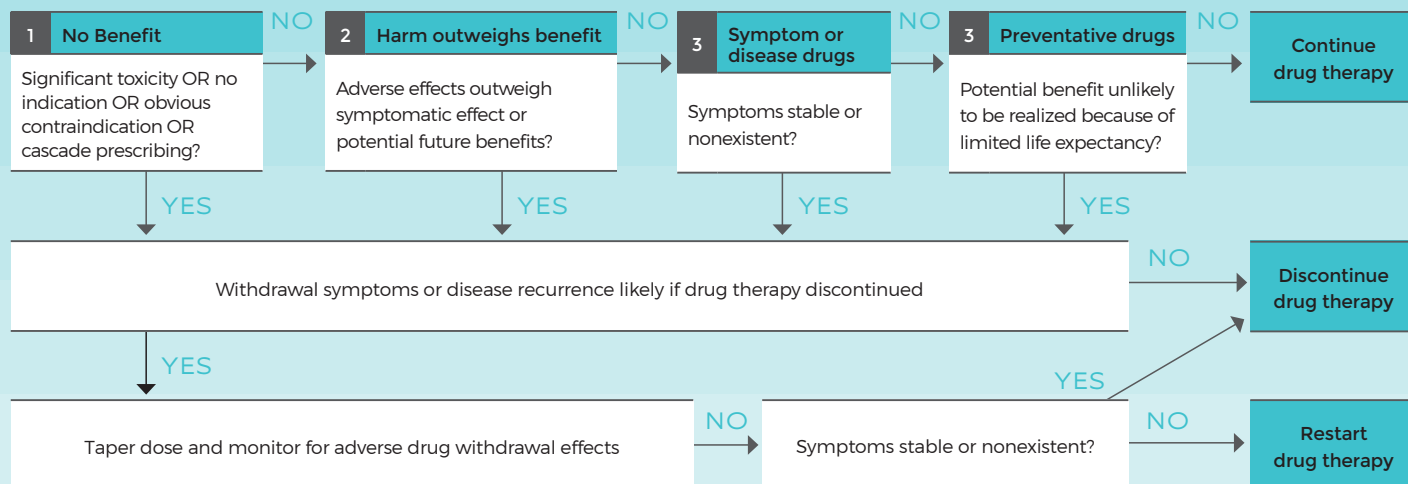
- Medications that provide immediate relief for distressing symptoms (eg. analgesics, antiemetics)
- Medications that modify an acute condition that is life-threatening, or will soon result in distressing symptoms if not treated (eg. antibiotics for severe pneumonia or sepsis, diuretics for acute heart failure)
- Medications that modify a chronic condition that may progress to become life-threatening or cause significant symptoms if not treated (eg. methotrexate for rheumatoid conditions).
- Medications that have the potential to prevent a serious disease, without symptomatic benefit (eg. antiplatelet agents, antihypertensives)
- Medications that are unlikely to be useful in either short or long term (eg. fish oils, vitamins, glucosamine)
- Medications that are used for indications where non-pharmacological therapy is equally or more effective (eg. physiotherapy for back pain, sleep hygiene vs long term benzodiazepines)

To identify potential agents for deprescribing, Scott et al suggested the following:

- Medications known to have a poor risk vs benefit ratio in the elderly (eg. Beer's criteria,⁶ STOPP/START criteria,⁷ or other inappropriate prescribing lists)
- Medications that duplicate indications and/or classes of agents (eg. mirtazapine at night with temazepam at night)
- Medications to treat a sign or symptom that may be an adverse drug event from another medication (eg. oxybutynin for urinary incontinence associated with cholinesterase inhibitors)
- Medications used at a dose that is likely to cause toxicity in the elderly should have doses reduced (eg. 20mg rivaroxaban in elderly patients, 4g paracetamol in lightweight elderly women)
- Medications that are associated with multiple drug-drug or drug-disease interactions (eg. diltiazem) may be substituted
- Medications that are taken more than once daily (eg three times daily metformin) could be converted to once daily
- Multiple medications that are available in combination forms may reduce medication burden (eg. amlodipine/atorvastatin)
- Medications where adherence is an issue (eg. metered dose aerosols, night-time statins)

In a more recent publication, Scott et al. constructed an algorithm for deciding the order and mode in which drug use could be discontinued.⁸ This is shown in [Figure 1 on page 3](#).

DEPRESCRIBING ALGORITHM

Figure 1: Algorithm for Deprescribing⁶

FEASIBILITY STUDY

A feasibility study of discontinuation of multiple medications in older adults has been published.⁹ These authors used principles similar to those outlined above in 70 patients (average age 82.8 years). They followed patients for an average of 19 months and were able to cease 311 different medications in 64 of the patients. At follow-up, 81% of the medications had not been recommenced and 88% of patients reported an improvement in global improvement in health. Cessation was most commonly attempted with benzodiazepines, statins, antihypertensives and frusemide.⁹ A randomised controlled trial of deprescribing to optimise health outcomes for frail older people is currently recruiting patients in Australia.¹⁰

If cessation of an agent is undertaken it is important to monitor the patient after the cessation for any potentially negative outcomes.¹¹ Some medications may cause withdrawal reactions which may require that cessation be undertaken by tapering the dose. Some medications may be having an impact on the patient's metabolism or elimination of other medications, and cessation may result in a changed effect from remaining medications (eg. ceasing amiodarone in a patient taking digoxin will result in a gradual reduction in the digoxin effect).

Finally, and most commonly, the underlying condition for which the medication was prescribed may return. In some cases, true rebound may occur and the condition is worse than when the medication was originally commenced (eg rebound hyperacidity from ceasing proton pump inhibitors).¹¹

Whilst many patients may be willing to try ceasing medicines, some barriers may exist, including:

- previous negative experiences with drug withdrawal (eg. previous rebound insomnia after ceasing temazepam)
- anxiety and fear of consequences of stopping a medicine that has been prescribed for a long period (eg. previous doctors' instructions to take "for the rest of their lives")
- reluctance to stop a drug when a patient believes it may prolong life or improve function (eg. Statins in the elderly many years after a primary event)
- perception that deprescribing suggests that the patient is 'not worth treating' (eg. cessation of aspirin interpreted as "giving up")

Ideally, the doctor, patient and/or carer need to be engaged in the process and without cooperation deprescribing is less likely to succeed.

Patients should be informed that deprescribing is intended to improve their quality of life by ensuring they do not receive unnecessary medicines with either no or minimal benefit and/or some potential for harm.

Often, explaining that cessation/reduction is a temporary situation, so that they are aware that drugs may be restarted if needed enhances the likelihood of participation. Following up to determine the success or otherwise (ie. development of any withdrawal symptoms etc) of any reduction/cessation is an important part of the process.

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RESOURCES

- ☒ QUICK REFERENCE GUIDE
- ☒ ANTIHYPERTENSIVES GUIDE
- ☒ ANTIPLATELET AGENTS GUIDE
- ☒ ANTIPSYCHOTICS GUIDE
- ☒ BENZODIAZEPINES GUIDE
- ☒ BISPHOSPHONATES GUIDE
- ☒ STATINS GUIDE
- ☒ VITAMIN D & CALCIUM GUIDE



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