Editorials

Deprescribing preventive medication in older patients

With increasing age, comorbidity, and frailty, the balance between potential harms and benefits of long-term medication may shift, requiring doctors to reconsider whether continued prescription is still justified. This appears especially true for preventive medication, such as cardiovascular drugs. Yet, in daily practice, deprescription (reduction or discontinuation) is often neglected, and there have been reports of over one-third of older patients using potentially inappropriate medication.[1] In this editorial, we aim to encourage practising GPs to consider deprescription as part of their clinical routine.

BENEFIT-TO-HARM RATIO OF CARDIOVASCULAR MEDICATION

Guidelines on cardiovascular risk management offer clear directives to prescribe preventive drugs for patients in midlife, but lack consensus for older patients, as this age group was long underrepresented in randomised controlled trials. Over the last two decades, more trials with older participants have been performed. These have demonstrated that some cardiovascular drugs, such as antihypertensive medication, can effectively prevent cardiovascular disease, even for the oldest old (>80 years).[2] However, it is questionable whether the results of these trial populations can be generalised to the older population, including multimorbid or frail patients. In addition, as these trials have an average follow-up of <5 years and mortality rates were relatively low,[2] it is unclear whether preventive treatment remains useful for persons with a limited life expectancy due to, for example, advanced stages of cancer, chronic obstructive pulmonary disease, or heart failure. The heterogeneity among older patients inherently complicates preventive treatment and precludes use of the one-size-fits-all approach that is generally tested in randomised controlled trials. Meanwhile, side effects, such as those of statins, will gain importance with increasing age as, for many older patients, treatment goals shift from preventing morbidity and mortality to maintaining good quality of life and functional independence.[3] Other concerns related to potentially inappropriate medication and polypharmacy are that they are associated with drug-related hospital admissions, increased fall risk, mortality, and poor functional outcomes.[4] The oldest old are especially at risk of hospitalisation for haemorrhage with anticoagulant or antiplatelet therapy, or hypoglycaemia with insulin or oral glucose-lowering drugs. These hospitalisations are associated with high healthcare costs.

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The pharmaceutical industry has a strong propensity to introduce medication for sustained use and tends to neglect clinicians' needs to know for whom, when, and how deprescription might be indicated. This is reflected in the limited number of deprescription trials. These trials showed no apparent harm of deprescribing within a relative short follow-up and in only a few participants medication had to be restarted.[5] In this issue of *BJGP*, Thio and colleagues demonstrate that deprescribing chronic medication generally appears safe, but there is large variety in the percentage of relapse of symptoms necessitating medication restart.[6] Trials with a longer follow-up in frail older adults or older people with a limited life expectancy are needed, to assess whether deprescribing is indeed safe in the long term (that is, does not increase functional impairment due to, for example, an increased stroke risk) and for whom it may be indicated. Given the limited available evidence, guidelines contain few directives on when and how to stop preventive medication. The Beers criteria, which are guidelines specifically designed to improve safety of prescriptions in older adults, do not include directives for deprescription of cardiovascular medication in general, but only recommend avoiding a few specific preventive drugs (such as, short-acting dipyridamole and alpha-blockers).[7]

PHYSICIANS' AND PATIENTS' VIEWS OF DEPRESCRIPTION

Primum non nocere or non-maleficence is one of the guiding principles of the medical profession. However, the weighing of benefit and harm may be more self-evident to apply when prescribing a new treatment than when deprescribing an existing one. As GPs have a holistic view on their patients, with varying levels of frailty and cardiovascular risk, it is one of their core tasks to scrutinise the pros and cons of prescription and deprescription. Nevertheless, the daily time constraints and automated prescription routines facilitate continuation of medication, instead of a critical appraisal of its appropriateness.[8] In addition, GPs have pointed out the struggle when balancing potential harms and benefits given the lack of evidence in vulnerable older patients. (Box 1 contains a hypothetical case that may illustrate this unclear balance.) An interesting barrier to deprescription of preventive medication is anticipated regret, that is, fear of a potentially preventable adverse outcome. GPs are well aware of background cardiovascular risk despite (adequate) treatment, but foresee that events occurring after deprescription will be attributed to the withdrawal of medication. These barriers create the feeling of 'swimming against the tide' when considering deprescription. In addition, GPs appear to have various presumptions of patients' concerns. For example, they are anxious that bringing up the subject may

Box 1. A case for deprescription?

An 84-year-old widow consults her GP for advanced care planning. Her main goal is to remain independent as long as possible, with a good quality of life. Over the last few years, her mobility has decreased following an ischaemic stroke, but she is still able to take care of her own household. Her blood pressure has been stable for several years (around 140/90 mmHg) with the use of two antihypertensive drugs, of which she does not experience any side effects. In addition to the antihypertensive medication, she currently uses seven other drugs. Should deprescribing her antihypertensive medication be considered and discussed if the patient does not actively address the subject? And, if so, how should lowering or stopping altogether be weighted in the light of potential benefits and harms?

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inadvertently convey the message that they are giving up on their patients.

This presumption is contradicted by patients with a limited life expectancy, of whom only a minority expressed concern that deprescribing indicated physician abandonment. Patients expressed concerns that their health could deteriorate if medication were deprescribed, and strived to be a 'good' patient by complying with prescribed medication.[9] The barriers between GPs and patients may create a 'no man's land' where the appropriateness of medication remains undiscussed. Good consultation is therefore required, during which the balance of benefits and harms should be conveyed and integrated with patient preference and potential concern.

IMPROVEMENT OF CLINICAL PRACTICE

Currently, in routine clinical practice, many GPs do not appear to have sufficient time to take a proactive attitude towards deprescribing in older people.[8] They would value organisational support to facilitate this complex issue, for example, through the provision of an annual health check in the oldest old or in frail older patients. Multifaceted pharmaceutical interventions in older patients with polypharmacy are effective in reducing inappropriate medication.[10] These interventions contain, for example, a medication review, counselling, doctor and/or patient education, or computerised decision support. An important determinant of success is a multidisciplinary approach.[10] Integration with existing programmes, such as the comprehensive geriatric assessment for frail older adults and advanced care planning in palliative care, may further enhance attention for deprescription. During a medication review the outcome prioritisation tool may aid assessing the patients' priorities and to reach a shared decision to promote deprescribing.[11] This may be especially beneficial in patients who prioritise 'maintaining independence', as deprescription of preventive medication might be brought forward.

CONCLUSION

More dedicated time and attention should be given to deprescription of long-term preventive medication in older patients. Given the unclear overall benefit-to-harm ratio, especially in frail older patients and patients with limited life expectancy, continuation of this medication may no longer be justified. In this population, there is an urgent need for deprescription trials with a longer follow-up and strategies to improve shared decision making. Structural medication reviews for frail older patients and older patients with a limited life expectancy should facilitate both awareness and opportunities for deprescription.

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REFERENCES

1. Bradley MC, Fahey T, Cahir C, *et al.* Potentially inappropriate prescribing and cost outcomes for older people: a cross-sectional study using the Northern Ireland Enhanced Prescribing Database. *Eur J Clin Pharmacol* 2012; **68(10):** 1425–1433.
2. Bejan-Angoulvant T, Saadatian-Elahi M, Wright JM, *et al.* Treatment of hypertension in patients 80 years and older: the lower the better? A meta-analysis of randomized controlled trials. *J Hypertens* 2010; **28(7):** 1366–1372.
3. van Peet PG, Drewes YM, Gussekloo J, de Ruijter W. GPs' perspectives on secondary cardiovascular prevention in older age: a focus group study in the Netherlands. *Br J Gen Pract* 2015; DOI: https://doi.org/10.3399/bjgp15X687373.
4. Fried TR, O'Leary J, Towle V, *et al.* Health outcomes associated with polypharmacy in community-dwelling older adults: a systematic review. *J Am Geriatr Soc* 2014; **62(12):** 2261–2272.
5. Kutner JS, Blatchford PJ, Taylor DH Jr, *et al.* Safety and benefit of discontinuing statin therapy in the setting of advanced, life-limiting illness: a randomized clinical trial. *JAMA Intern Med* 2015; **175(5):** 691–700.
6. Thio SL, Nam J, van Driel ML, *et al.* Effects of discontinuation of chronic medication in primary care: a systematic review of deprescribing trials. *Br J Gen Pract* 2018; DOI: https://doi.org/10.3399/bjgp18X699041.
7. American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *J Am Geriatr Soc* 2015; **63(11):** 2227–2246.
8. van Middelaar T, Ivens SD, van Peet PG, *et al.* Prescribing and deprescribing antihypertensive medication in older people by Dutch general practitioners: a qualitative study. *BMJ Open* 2018; **8(4):** e020871.
9. Weir K, Nickel B, Naganathan V, *et al.* Decision-making preferences and deprescribing: perspectives of older adults and companions about their medicines. *J Gerontol B Psychol Sci Soc Sci* 2017; DOI: 10.1093/geronb/gbx138.
10. Cooper JA, Cadogan CA, Patterson SM, *et al.* Interventions to improve the appropriate use of polypharmacy in older people: a Cochrane systematic review. *BMJ Open* 2015; **5(12):** e009235.
11. van Summeren JJ, Schuling J, Haaijer-Ruskamp FM, Denig P. Outcome prioritisation tool for medication review in older patients with multimorbidity: a pilot study in general practice. *Br J Gen Pract* 2017; DOI: https://doi.org/10.3399/bjgp17X690485.