Clinical vignettes to help you deprescribe medications in elderly patients

Introduction to the polypharmacy case series

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You have seen it. An elderly patient arrives in your practice with bags full of medications. She does not know why certain medications were prescribed or whether they are helping. The prescriptions come from different physicians. For some medications, the original prescriber has passed away. The patient is admitted to hospital; multiple changes to medications are made but you are not told why. Family physicians have expressed frustration with the polypharmacy that results from the use of multiple clinical guidelines, are not sure what patients are actually taking, might have difficulty distinguishing symptoms from side effects, and do not have a ready-made solution to the problem.[1]

Effects of polypharmacy

Polypharmacy is variously defined as a high number of medications (eg, more than 5 to 10), use of more medications than clinically indicated, or use of inappropriate medications. In 2009, 63% of Canadian seniors were taking more than 5 medications and 30% of those aged older than 85 were taking more than 10 medications.[2] The prevalence is even higher for those living in long-term care centres.[3] The effect of polypharmacy on our elderly population is substantial. Polypharmacy is associated with noncompliance, drug-drug interactions, medication errors, and adverse drug reactions—including falls, hip fractures, confusion, and delirium—accounting for a considerable percentage of potentially preventable emergency department visits and hospitalizations.[4,5]

Challenges in addressing polypharmacy

Family physicians might not be aware of potentially useful interventions to reduce medication use, and even if they are, these might not be consistently applied. There are consensus-developed screening criteria to identify inappropriate medications, as well as algorithms and mnemonics to help health care professionals conduct medication reviews and identify drug-related problems.[6] However, there is little guidance on how to implement suggested changes to reduce medication use. Many prescribers are reluctant to make changes, often fearing adverse drug withdrawal events[7] and saying they do not want to "rock the boat."

Bruyère Continuing Care Geriatric Day Hospital

At the Bruyère Continuing Care Geriatric Day Hospital (GDH) in Ottawa, Ont, our elderly patients typically present with cognitive impairment, falls, pain, and deconditioning. They attend twice per week for functional assessment and rehabilitation with an interprofessional team over a 12-week period. Patients referred for medication review are typically taking 15 medications per day and have an average of 9 drug-related problems.[8] We see prescribing cascades (in which a medication has been prescribed to treat a side effect of another medication) and adverse effects of medications on multiple systems including hypotension, decreased cognition, and poor balance. One by one, we taper and stop medications for which we have little evidence for continued use and those that are probably contributing to adverse effects. We focus on reducing pill burden, facilitating independent medication management, furthering knowledge and understanding of medication use, and communicating changes clearly. The outcome can be amazing. We have seen patients demonstrate considerable improvement in symptoms with reduction in medication.

Clinical vignettes for interprofessional education

This commentary introduces a series of clinical vignettes—case reports that demonstrate successful reduction in medication in our patients (one of which appears on **page 1300**).[9] These vignettes provide examples of how medication burden can be reduced and patient quality of life improved so that others might gain confidence in stopping medications.

Each member of our interprofessional team plays a role in helping to reduce medication use and monitor the effects. These approaches are demonstrated in the vignettes. However, we realize that many family physicians do not practise in interprofessional teams or have resources such as geriatric day hospitals. Throughout the series we will focus on basic principles that all family physicians can apply to help reduce the burden of polypharmacy in their elderly patients, such as the following.

- In a symptomatic patient, could the problem be a drug?
- Consider which of the drugs a patient is taking are beneficial.

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- Prioritize drugs for a trial of tapering.
- Try to simplify drug regimens to reduce pill burden.[10]

A community-based physician might feel overwhelmed when faced with an elderly patient and a brown bag of 20 to 30 medications. Our vignettes highlight that there is no right place to start and that each approach is individualized. At the GDH, we often start by asking which problem is most affecting patient function. If there are 2 competing priorities such as orthostatic hypotension and hypoglycemia, then changes can occur concurrently or in succession with close follow-up. We recognize that weekly follow-up might not be practical in a busy primary care practice. Perhaps follow-up can be arranged in 2 to 3 weeks with documenting and monitoring done over the telephone by family, caregivers, or the office nurse, or by enlisting the community pharmacist. The community pharmacist can also help identify drug interactions, potentially inappropriate medications (such as those with anticholinergic properties), and symptoms that might be drug induced. With longer follow-up times, the timeline for change implementation might be longer—perhaps 6 months instead of 3 months. It is often challenging to keep track of the greater vision with usual progress notes. A helpful timesaving measure is having a regularly updated medication care plan at the front of a paper chart or added to an electronic medical record. Some communities have family physicians with care of the elderly training who can be of assistance to other primary care providers in managing elderly patients with complex medication regimens and multiple medical issues. Some family physicians have found it helpful to start by focusing on one potentially inappropriate medication for all patients to make tapering and monitoring more manageable.

We have included group discussion instructions and worksheets so that the vignettes can be used for interprofessional education in geriatric pharmacotherapy or to facilitate a discussion group similar to a journal club—another method of enhancing confidence in reducing medications.

The series is planned for the *Canadian Pharmacists Journal*, *Canadian Family Physician,* and the *CMAJ*. Each vignette will reference the others and link to online resources to facilitate use for case discussion. We hope pharmacists, physicians, nurses, and other prescribers and health care professionals will find the strategies supportive of their own efforts to reduce polypharmacy. We hope those who develop clinical guidelines will take note and consider how they might include deprescribing guidelines to further support tapering and stopping of medications when evidence is limited or when pharmacokinetic and pharmacodynamic parameters affecting medication distribution and effectiveness change with age.

We thank the Bruyère Academic Medical Organization for its support, our colleagues in the GDH for their collaboration, and our patients who willingly work with us to taper their medications, in particular the many patients who enthusiastically agreed to share their stories. We hope you enjoy the series and welcome your comments and feedback.

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Competing interests
None declared

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This article is one of several prepared as part of a collaboration among the Bruyère Continuing Care Geriatric Day Hospital, the *CMAJ*, *Canadian Family Physician*, and the *Canadian Pharmacists Journal* to assist clinicians in the prevention and management of polypharmacy when caring for elderly patients in their practices.