



the Translator

Canadian Pharmacy ► Research ► Health Policy ► Practice ► Better Health

The role of pharmacists in deprescribing

The Canadian Institute for Health Information (CIHI) has projected that Canada will spend \$211 billion on health this year, including \$34.5 billion in drug expenditures alone.¹ Deprescribing is the practice of stopping, reducing, or slowly withdrawing medications that are inappropriate, unsafe or ineffective. Pharmacists can play a key role in helping Canadians reduce the number of medications they are taking.² In fact, an Ontario pharmacist has recently received government funding to develop and implement guidelines to assist prescribers with deprescribing medications.³ This issue of *the Translator* highlights the role of the pharmacist in deprescribing in an effort to both optimize the health of Canadian seniors and ensure the sustainability of the health care system:⁴

- Managing polypharmacy in a 77-year-old woman with multiple prescribers
- Discontinuing benzodiazepine therapy: An interdisciplinary approach at a geriatric day hospital
- Deprescribing medication in very elderly patients with multimorbidity: the view of Dutch GPs
- Incidence and economic burden of adverse drug reactions among elderly patients in Ontario emergency departments

Managing polypharmacy in a 77-year-old woman with multiple prescribers

Farrell B, Merkley VE, Thompson W. Managing polypharmacy in a 77-year-old woman with multiple prescribers. *CMAJ*. 2013; 185; 1240-5.

Issue: Elderly patients are particularly vulnerable to increased risk of falls and cognitive impairment when multiple medications are prescribed as treatment for many disease states (polypharmacy). A geriatric day hospital (GDH) highlighted a case of a 77-year-old woman referred after a history of multiple falls per week over a three-year period following a stroke. Upon presenting to the GDH, the patient was in a wheelchair and unable to stand without assistance, had been taking 32 pills a day and expressed concern over her lack of independence, which included being unable to wash or dress herself. Her co-morbidities included: cerebrovascular disease, coronary artery dis-

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ease, hypertension, dementia, fibromyalgia, myositis, bipolar disorder, arthritis, remote duodenal ulcer and hypothyroidism.

A solution: The patient was admitted to the GDH for a 12-week period in which she visited twice weekly to receive patient-focused care from an interdisciplinary team of health

care professionals to reduce her risk of falls, regain independence and improve overall quality of life. Her list of medications was reviewed by a pharmacist who assessed the indication, effectiveness, safety, compliance and patient understanding of each medication. Following this assessment, numerous medication changes, in collaboration with a health care team, were implemented into the patient's care plan. The 77-year old woman went from taking 32 to 17 pills daily, as many of the changes involved discontinuing or reducing doses of drugs known to cause sedation, increased risk of falls and cognitive impairment in the elderly. By the end of the 12-week admission, the patient

¹ National Health Expenditure Trends, 1975 to 2013. Canadian Institute for Health Information. 2013. http://www.cihi.ca/CIHI-ext-portal/pdf/internet/NHEX_EXEC_SUM_2013_EN. Accessed Oct 31, 2013.

² Kwan D, Farrell B. Polypharmacy. Canadian Healthcare Network – Pharmacy Practice. April 1, 2013. <http://www.canadianhealthcarenetwork.ca/pharmacists/discussions/polypharmacy-20802/5>. Accessed Oct 15, 2013.

³ Cross C. Introducing deprescribing into a culture of medication. *CMAJ*. 2013. <http://www.cmaj.ca/content/early/2013/08/12/cmaj.109-4554.full.pdf+html>. DOI:10.1503/cmaj.109-4554.

⁴ Primary Health Care and Prescription Drugs – Key Components to Keeping Seniors Healthy. In: Health Care in Canada, 2011 – A focus on seniors and aging. Canadian Institute for Health Information; 2011. https://secure.cihi.ca/free_products/HICIC_2011_seniors_report_en.pdf. Accessed Oct 1, 2013.



had improved cognition and mobility, a decreased risk of falls and a reduction in pill burden. In addition, the patient reported to have regained her self-confidence and independence in carrying out daily activities. Follow-up neuropsychology assessment demonstrated that she did not have dementia and her dementia medication was stopped. The many benefits this 77-year-old patient experienced were made possible through the comprehensive care she received from the collaborative effort of many health care professionals at the GDH. A pharmacist and physician simplified the medication list to reduce potentially harmful side effects, a physiotherapist provided care to improve conditioning and mobility, an occupational therapist educated the patient on fall preven-

tion strategies and a social worker provided supportive counseling.

Implications: Pharmacists play an integral role within inter-professional health care teams in the provision of patient care. In conducting medication reviews, pharmacists consider patient-specific characteristics, such as age, to assess the appropriateness, effectiveness, safety and compliance of medications for a given patient. Such a thorough assessment of medication regimens is particularly important for elderly patients, as many take multiple medications for several chronic diseases and receive care from multiple health care providers. Some medications are particularly harmful in the elderly because of significant side effects such as sedation,

cognitive impairment and unsteadiness. As medication experts, pharmacists can identify potentially harmful medications, including those that are known to increase risk of falls and cognitive impairment in the elderly, and work collaboratively with other health care providers to implement changes to medications. In this case of a 77-year-old at a GDH, the pharmacist assumed an important role within the care team by identifying medications that were possibly contributing to her falls and cognitive impairment and collaborating with a physician to make interventions aimed at reducing these risks. As demonstrated in this case, medications unsafe for use in older adults can be successfully stopped or reduced and pharmacists play an important role.

Discontinuing benzodiazepine therapy: An interdisciplinary approach at a geriatric day hospital

Chen L, Farrell B, Ward N. Discontinuing benzodiazepine therapy: An interdisciplinary approach at a geriatric day hospital. *Can Pharm J*. 2010;143:286-95.

Issue: Benzodiazepines are commonly prescribed to the elderly for insomnia but despite being intended for short term use, they are often taken for much longer periods of time. Much of this extended use may stem from a fear of the withdrawal effects associated with discontinuing these medications. However, withdrawal effects can be minimized and benzodiazepines can be successfully discontinued with an appropriate tapering regimen and support from multiple disciplines responsible for patient care. For years, health care professionals at a Canadian geriatric day hospital (GDH) have been champions for helping elderly patients taper and stop benzodiazepines and are determined to identify the components of their intervention that have led to their success.

A solution: The GDH conducted a qualitative study that examined patient and care provider experiences throughout the benzodiazepine tapering process. Researchers found that tapering benzodiazepines was a collaborative effort of many health care professionals. Pharmacists, nurses and physicians were most aware of patients undergoing tapering regimens, often working in collaboration to educate patients on benzodiazepines, initiate and monitor patient-specific tapering schedules and provide extensive follow-up. GDH patients are often admitted for reasons that may be related to benzodiazepine use, and in these cases, pharmacists tailor patient education specifically to the patient by referring



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to the reason for admission to highlight the risks. Other roles of the pharmacist include encouraging and motivating patients to consider tapering, and monitoring patients closely to discuss concerns and offer education regarding withdrawal effects. Included in this qualitative study were patient experiences, such as willingness to taper and tolerance to the tapering process. Many patients stated they had no prior knowledge of the adverse effects of benzodiazepines and they noted that they were more willing to taper after having been educated regarding the adverse effects of benzodiazepines. Most patients appeared to tolerate the tapering process well with no difficulties. Ultimately, this study found that interdisciplinary collaboration was critical to implementing successful tapering regimens and pharmacists held pivotal roles. In addition to physicians, nurses and pharmacists, other health care professionals, although

unknowing that tapering was taking place, were also integral in providing supportive care to patients, with their collective approaches mimicking typical cognitive behavioral therapy activities.

Implications: Pharmacists can make positive contributions within an interdisciplinary team toward ensuring best possible outcomes for patients. The GDH in this qualitative study demonstrates components of collaborative practice that can be adopted by primary care settings across a large scale. An opportunity exists for pharmacists to take leadership in educating patients of the risks of benzodiazepines, as many patients may not be aware of them. Providing education may motivate patients to initiate a discussion about their medication taking, and empower them to share in the decision-making process when it comes to their care. In particular, older adults taking benzodiazepines are at risk of adverse effects, and pharmacist intervention could increase a patient's willingness to taper. In collaboration with physicians and nurses, pharmacists use knowledge of tapering regimens to ensure safe and successful discontinuation of medications such as benzodiazepines. They can play a key role in monitoring the tapering process, including regularly scheduled follow-up visits to provide education on withdrawal effects and address patients concerns. Through such patient-focused roles, pharmacists can demonstrate competency in discontinuing medications.

Background or research methods: This study was conducted in a GDH in a large city in Ontario. In total, five patients and 13 health care providers were recruited as participants. Demographic information was gathered via chart reviews. Group discus-

sions and semi-structured interviews were implemented to collect the experiences of participants with regards to benzodiazepine tapering. Health care providers shared experiences of their respective roles within the process of tapering benzodiazepines,

and were asked to review and modify their role descriptions in response to information discussed during the interviews. Researchers used comparative analysis to retrieve common themes from interview transcripts.

Deprescribing medication in very elderly patients with multimorbidity: the view of Dutch GPs

Schuling J, Gebben H, Veehof LJ, Haaijer-Ruskamp F. Deprescribing medication in very elderly patients with multimorbidity: the view of Dutch GPs. A qualitative study. *BMC Family Practice*. 2012;13:56.

Issue: A number of factors influence Dutch general practitioners' (GPs) perspectives on deprescribing medications in the elderly. In particular, physician beliefs regarding patient preferences are a barrier. Some physicians perceive their patients as satisfied with taking multiple medications, while others feel that initiating a discussion about stopping medication might lead patients to believe that a physician has given up. Furthermore, some practitioners found conversations surrounding life expectancy and quality of life to be unethical, and, as a result, avoided such topics when speaking with their patients. Schuling et al noted some Dutch physicians felt that trying to adhere to multiple treatment guidelines resulted in an accumulation of medication in some patients. Finally, Dutch practitioners mentioned a lack of collaboration with other health care professionals, including pharmacists, was a barrier to adopting the practice of deprescribing.

A solution: This study found that some Dutch physicians were often unaware of patient preferences regarding drug therapy and concluded that improved information gathering regarding patients' beliefs is needed to create a culture whereby patients share in the decision-making process. Discussions of life expectancy, although difficult to initiate,

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must be had with elderly patients to take their beliefs into consideration when deciding how to proceed with preventative medications. Perhaps the time to benefit from a medication is longer than the patient's perceived life expectancy, in which case discontinuing the given medication may be of greater benefit, since removing the medication might eliminate an undesirable side effect and improve quality of life. Physicians in the study noted that assessing the benefits of preventative medications in the elderly is particularly difficult because they are not represented in many clinical trials, if any. Physicians suggested that an in-depth assessment of risk versus benefit in the elderly would provide much needed support when physicians decide to initiate or discontinue a medication for disease prevention. Knowledge of benefits and risks, along with patient preferences, might provide prescribers with the evidence needed to critique the guidelines and make patient-

specific recommendations regarding preventative medicine for the elderly.

Implications: Pharmacists are accessible health care professionals with competency in patient assessment. In gathering information from patients, pharmacists can determine patient beliefs regarding medication and apply such patient preferences to decisions regarding drug therapy in collaboration with physicians and other interdisciplinary team members. Pharmacists are also capable of critiquing research to determine risks and benefits of medications, and make evidence-based recommendations. In a collaborative practice, pharmacists can share information with physicians regarding medication risks and benefits, and support the decision-making process for drug therapy management. Relaying risk and benefit information to patients is also important and pharmacists provide such patient education. In caring for elderly patients, Dutch physicians acknowledged that decisions to initiate or continue medication are often difficult. In particular, decisions surrounding the appropriateness of medication use in the elderly can be supported in collaboration with pharmacists to apply patient preferences and risk versus benefit analysis to the decision-making process, and potentially de-prescribe medication for elderly patients.

Background or research methods: Three focus groups of 8 to 12 GPs were organized and discussed medication use in elderly patients. Focus group participants were first presented a hypothetical case of an elderly patient to remind them of similar patients within their respective practice settings. A moderator was involved

to facilitate discussion within each focus group, and periodically asked questions to generate conversation surrounding medication use in the elderly as it relates to topics such life expectancy, treatment targets, goals of care and time to benefit. Overall, GPs were encouraged to offer their views and experiences relating to reducing

medications in elderly patients. The focus group discussions were audio taped and transcribed verbatim to manuscripts that were read by the first and second authors. These authors selected text fragments for themes that they felt recurred throughout the focus group discussions.

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IMPORTANT DATES

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Incidence and economic burden of adverse drug reactions among elderly patients in Ontario emergency departments

Chen W, Bell C, Wodchis W. Incidence and Economic Burden of Adverse Drug Reactions among Elderly Patients in Ontario Emergency Departments. *Drug Saf*. 2012;35:769-81.

Issue: In Ontario between 2003 to 2007, emergency department (ED) visits due to adverse drug reactions (ADRs) increased from 6040 to 7222 for elderly patients age 65 years and older. By 2007, costs of emergency department visits and hospitalizations related to ADRs totaled \$13.6 million in Ontario alone. Extrapolate that across Canada, and costs equate to \$35.7 million nationwide or \$7 per patient over 65 years of age. Importantly, Wu et al examined how the number of prescription drugs taken affects the risk of experiencing an ADR and found that both the number of prescription drugs taken and the number of pharmacies visited one year prior to the emergency department visit were risk factors for severe ADRs. Patients taking between 6 and 10 drugs were about 1.5 times more likely to experience a severe ADR, while those taking 11 or more drugs were nearly twice as likely to experience a severe ADR. Polypharmacy is a growing concern in the elderly, as today many older adults continue to take medications unnecessarily.

A solution: Costs relating to the provision of health care in the elderly could be saved



By simplifying the medication regimens of elderly patients, adverse drug reactions may potentially be avoided and health care costs can be saved.

through reducing ADR risks. Wu et al demonstrate that taking multiple medications is a risk factor for severe ADRs in the elderly, and they mention, "Pharmacists are trained to identify and resolve potential drug-related

problems." Many medications have potential for causing harm in the elderly, and pharmacists can be involved in stopping or reducing doses of these medications. By simplifying the medication regimens of elderly patients, adverse drug reactions may potentially be avoided and health care costs can be saved.

Implications: Pharmacists across Canada are performing medication reviews with the purpose of ensuring best possible health outcomes for patients. Upon identifying potential drug therapy problems, pharmacists collaborate with physicians by offering recommendations for resolution. Pharmacists also have the competency to further expand their scope of practice into such roles as chronic disease management. This would allow pharmacists to monitor patients' disease progression over a long period of time, and, in collaboration with other health care providers, identify and resolve drug therapy concerns as problems arise. Determining the effects of pharmacist-led medication reviews and chronic disease management will require closely monitoring and recording outcomes for future research.

Background or research methods: This retrospective cohort study was conducted using population-based health care administrative databases. A total of five databases were analyzed, which included information regarding all Ontario ambulatory care settings, patient-specific information for all acute hospitalizations in Ontario, information regarding government-funded medications and medical expenses and demographic data of the participants involved.

The cohort studied was all Ontario patients over the age of 65 who had visited the ED for a cause relating to an ADR between April 1, 2003 and March 31, 2007. Visits to the ED related to ADR were identified using International Classification of Diseases, 10th Revision-Canadian Enhancement (ICD-10-CA) codes, which had been used for previous research in the United Kingdom. ADR-related ED visits were grouped based on patient outcomes into

three categories: admission to hospital, death and discharge from hospital. The economic burden was calculated separately as costs acquired in the ED, and costs resulting from hospital admission. Costs per ED visit and hospital admission were estimated by multiplying cost by a patient's resource intensity weight, or the relative resource consumption per patient. Costs were estimated and reported in 2008 Canadian dollars.

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