

EDITORIAL

## IMPROVING THE MANAGEMENT OF MEDICATION USE IN OLDER ADULTS

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The problems with geriatric pharmacotherapy are certainly not new. In fact, the wisdom of Solomon, "...there is no new thing under the sun",<sup>1</sup> is very applicable to this situation. Common problems in management of medication use in older adults include polypharmacy, inappropriate prescribing, medication errors, noncompliance, the physiological changes in the elderly that can increase susceptibility to certain drug-related problems, and the complexity of the medication use system itself.

These problems have a tangible negative economic impact in addition to their obvious clinical and psychosocial outcomes. Cooper has noted that in older adults, up to one-half of nursing home admissions and one-third of hospital admissions are due to medication problems, with the majority of these being due to drug misuse.<sup>2</sup> Our research team at Dalhousie University has recently estimated the total annual cost of preventable drug-related morbidity in older adults in Canada to be \$10.9 billion.<sup>3</sup> It is not surprising to health researchers and clinicians that CIHR's Institute of Aging has identified "medication use and mis-use" as a key area in which research will be supported.<sup>4</sup>

Despite these problems, there are plenty of reasons for optimism in improving medication use management in older adults. Health professionals, collectively, have never been better trained; breakthrough medications continue to arrive; gene therapy holds much promise; evidence-based medicine is being promoted through the creation of national treatment guidelines and patient health management programs; patients have almost unlimited access to information about their diseases and medications through the Internet and other sources; and criteria for prescribing in the elderly – such as those developed by Beers and McLeod<sup>5,6</sup> – help to alert clinicians to "high risk" medications.

Given the existence of these strengths and assets, a question needs to be asked and answered: **Why do the problems with the management of medica-**

**tion use in seniors continue?**

The accompanying article (page 76 in this issue) provides some insight into answering this question.<sup>7</sup> As described in the article, 24 Canadian geriatricians, clinical pharmacologists and general practitioners (GPs) provided us with their opinions on how best to reduce *preventable* drug-related morbidity (PDRM) in older adults. The word *preventable* is a subtle but important part of this research. Being preventable, these poor outcomes should, by definition, be able to be reduced. Overall, these clinicians told us that on-going monitoring for drug-related problems would be the most successful approach for reducing PDRM.

While it was beyond the scope of this study, another important question to ask is, **how can we promote on-going monitoring on a system-wide basis in our health-care system?** I propose three methods to help accomplish this:

### 1. Encourage seamless multidisciplinary pharmaceutical care

Although they were not the first to coin the term, Hepler and Strand helped to advance *pharmaceutical care* as a medication use practice model for health professions.<sup>8</sup> Hepler and Grainger-Rousseau further described what a pharmaceutical care system would look like.<sup>9</sup> In their model of the medication use system, patient progress is monitored to prevent, detect, and resolve drug-related problems before they develop into drug-related morbidities. Regular and effective communication among the physician, patient, pharmacist, and other health-care professionals is critical to proper functioning of the system.

By nature, the medication use process in older adults is complex and crosses many disciplines and practice settings. Currently, we have departments of geriatric medicine in many large teaching hospitals and expert clinicians-geriatricians, clinical pharmacologists, GPs, nurses and nurse practition-

ers, and pharmacists, who are providing pharmaceutical care at a high level. Regrettably, communication between health professionals and institutions is typically suboptimal, resulting in inadequate monitoring for drug-related problems. This lack of seamless multidisciplinary pharmaceutical care greatly contributes to PDRM. Lohfeld and Brazil argue that “the multiple and complex health issues related to providing care for older adults” require “collaborative teams of experts with different backgrounds...to fully identify problems and their effective solutions”.<sup>10</sup> Training in geriatrics and practical user-friendly monitoring mechanisms for GPs will help them participate in these types of teams for older adults. Thus, if effective monitoring is to occur, we need to ensure that seamless multidisciplinary pharmaceutical care becomes the standard of care.

## **2. Advance the provision of financial incentives for on-going monitoring**

The case for on-going monitoring of drug therapy goals in seniors can be easily articulated, but financial incentives must be reconfigured to ensure that monitoring happens in daily practice. The delivery of health-care is driven by the financial systems in place to reimburse the provision of care and services. Financial incentives for pharmacotherapy monitoring, whether for seniors or others, are almost nonexistent. What financial incentives are in place for a GP to extend an office visit by an extra 10 minutes to adequately discuss any questions or concerns about the senior’s prescription and over-the-counter drugs? What financial incentives are in place for a physician at a long-term care facility to discuss the results of a drug utilization evaluation (DUE) with other health professionals? What financial incentives are in place for a pharmacist to call a patient a few days after a prescription is filled to make sure the patient has no side-effects? The fact that some health professionals are providing these services is a testimony to their own personal high commitment to care, not to sound health policy.

## **3. Use health technologies to assist with monitoring**

Given that thorough monitoring of drug-related problems in older adults is complex and time-consuming and that many of the health professionals involved in the care of seniors are overworked and in short supply, tools that can facilitate monitoring

can play a vital role. Many current and emerging technologies serve both to help monitor patients and to improve the safety of the medication use system. Computerized physician prescription entry can reduce problems associated with illegible writing and can provide prescribers, pharmacists and other health-care professionals with point-of-use drug information, treatment guidelines, formulary information and predictive models that can result in more appropriate prescribing. For example, Bates has documented the positive impact of computerized physician-order entry systems in the inpatient setting to reduce the number of medication errors.<sup>11</sup> Moreover, Teich and colleagues<sup>12</sup> reported that computerized physician-order entry resulted in increased use of more cost-effective drugs, more appropriate dosing and better use of medication to prevent a potential morbidity.

If technology in physicians’ offices were also integrated with other health services systems, then physicians would be able to better coordinate the drug therapy of their patients by having information on other medications that their patients were also prescribed.<sup>13</sup> This could help to reduce drug-interactions and therapy duplication. Anderson and Lexchin have said, in relation to improving prescribing, that there is a need “to develop new ways to successfully provide up-to-date, accurate and relevant information to physicians and on the ever-changing and increasingly complex world of therapeutics”.<sup>14</sup>

Technologies must always be carefully examined before use, but undoubtedly they are under-used for medication monitoring, resulting in unnecessary work and poor patient outcomes.

## **Make monitoring the standard of care**

How, then, can these three methods be enacted to ensure on-going monitoring in every setting and for every patient? Professional organizations like the Canadian Geriatrics Society and the Canadian Medical Association have a role in informing other stakeholders in the health-care system about the essential and cost-saving function of monitoring. Some promising steps have occurred in pharmacy circles, with two national workshops on seamless care by the Canadian Pharmacists Association (CPhA) and the Canadian Society of Hospital Pharmacists (CSHP), as well as a forthcoming publication of a workbook for pharmacists by CPhA. Since on-going monitoring can reduce overall

health-care costs, public and private payers of health-care must move beyond simply paying for the drug itself and distribution costs, to paying for patient health management programs and other initiatives that place more emphasis on whether the patient has met his/her goals of therapy. Finally, all clinicians must ask themselves who is monitoring the drug therapy in their patients and how is the information being communicated among the relevant health professionals.

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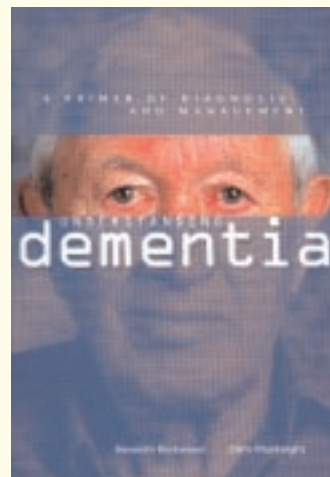
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