Achieving optimal prescribing

What can physicians do?

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In a 2010 commentary on prescribing published by the *Canadian Medical Association Journal*, Dr Simon Maxwell urged that "every effort should be made to improve quality and minimize risk."[1] We describe why and how Canadian physicians are responding to this challenge.

Recognized issue

Prescription drugs are the therapeutic backbone of clinical practice. In 2005, Canadians received 14 prescriptions per capita; that number rose to 74 for people 80 years and older.[2] In 2009, the per capita cost of prescription drugs in Canada was $877. Whereas in 1985 drug expenditures accounted for less than a tenth of total health expenditures, by 2009 they amounted to almost 16.2%.[3] Both the frequency with which drugs are prescribed and the cost borne by patients and the health system underscore the importance of ensuring that prescribing is of the highest calibre.

Unfortunately, there is a growing body of evidence that suggests that prescribing is often suboptimal. Some drugs are prescribed more frequently than is appropriate. Antibiotics, for example, are often prescribed for children with minor respiratory illnesses that are likely viral in origin.[4,5] The underuse of clinically indicated medication is another type of suboptimal prescribing. Canadian studies have shown underuse of lipid-lowering agents,[6] blood pressure drugs,[7] medications for congestive heart failure,[8] and prescriptions for post–myocardial infarction care.[9] Finally, practitioners might make incorrect drug choices that might result in harm to patients. For example, a study of hospitalized patients in 5 Canadian provinces found that a quarter of adverse events were related to drug and fluid therapy and that 37% of the events were highly preventable.[10] Less is known about community-based practice; however, the Canadian component of an international study reported that 26% of errors in family practice involved treatments, including medications, and almost 40% of errors were believed by reporting physicians to have harmed patients.[11] Seniors[12] and those given opioids[13] appear to be groups particularly vulnerable to inappropriate prescribing.

While suboptimal prescribing has long been recognized as an issue, it has attracted increased attention since 2004 when the First Ministers called for the creation of a National Pharmaceuticals Strategy. One of the strategy's 9 objectives was "to influence the prescribing behaviour of health care professionals so that drugs are used only when needed and the right drug is used for the right problem."[14] However, the 2006 *National Pharmaceuticals Strategy Progress Report*[14] included less than a page on appropriate drug prescribing. Although it mentioned the important establishment of the Canadian Optimal Medication Prescribing and Utilization Service, it indicated that the Ministerial Task Force's next step was largely to "continue to monitor progress." The following year the Health Council of Canada hosted the *Safe and Sound: Optimizing Prescribing Behaviours* symposium to assist in the continued development of the National Pharmaceuticals Strategy. In the conference report, the council stated that sound prescribing decisions required "targeted education and easier access to the right information" for practitioners.[15] The key strategies identified were the following: expansion of existing provincial academic detailing programs; creation of trusted sources of objective information for patients; and enhancement of existing initiatives, such as the Canadian Optimal Medication Prescribing and Utilization Service, directed at optimizing prescribing.[15]

Interventions

Many explanations are offered for suboptimal prescribing, including practitioners' inadequate access to timely drug information or the inappropriate influence of the pharmaceutical industry. But the central question remains: Can prescribing be improved? The research literature[16,17] documents that there are effective interventions that can improve the prescribing behaviour of practitioners. However, the effect size is usually small to modest; it might be context dependent; and the effect of combining methods has been poorly studied. Interventions shown to have beneficial effects include the following:

- academic detailing, in which a trained educator visits prescribers in their practice setting to convey focused, evidence-based information;
- electronic point-of-care, encounter-specific drug information, coupled with clinical decision support; and
- audit and feedback, a process that reviews clinical performance, often compared with peer practice or clinical practice guidelines, with suggestions for improvement where indicated.

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Pursuit of optimal prescribing

How can the optimal prescribing agenda move forward? A foundation insight from experience to date suggests that—regardless of the specific approach taken to enhancing prescribing or changes in the health care delivery system—little will change without the very active engagement of the prescribers themselves. Physicians and their organizations must bring to the task both their commitment and their diverse educational, credentialing, and regulatory powers. A second critical element is access to robust data and agreed-upon metrics by which to assess prescribing quality. Quality indicators might include the following: structural indicators, such as the availability of a quality evidence-informed drug formulary; process indicators, including how well prescribing meets standards or guidelines for specific conditions; and outcome indicators, among which would be the effect of prescribing on mortality and morbidity. In short, an ongoing, systematic approach to assessing prescribing quality should be integral to care delivery and tied to educational strategies.

What are the next steps? In June 2009, with support from the Canadian Institutes for Health Research, several medical organizations, partners from the nonprofit sector, and pharmacists met to discuss prescribing enhancement. The group has continued as an ad hoc working group that meets by teleconference. There is unanimity that the pursuit of optimal prescribing is an important goal and that no single organization has the capacity to achieve it alone. There is also recognition that organizations can only participate in those group activities—including this commentary—that are sanctioned by their individual mandates.

The initial work plan focuses on the following:

- establishing a consensus definition of *optimal prescribing* and suggesting feasible ways to measure it;
- raising awareness among practitioners that suboptimal prescribing is an important issue, some aspects of which only they can effectively address; and
- promoting the funding and development of effective tools and educational activities[18] to enhance prescriber activity and contribute to a culture of quality.

Pharmaceuticals play a critical role in the health of Canadians. Practitioners want to know that their use of pharmaceuticals optimizes benefits and minimizes risks for their patients without imposing unnecessary costs on the health system. It is time that medical organizations and relevant public sector partners coalesced to ensure prescribers have ready access to the information, including their own prescribing data and accepted therapeutic guidelines, necessary to advance this goal.

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Competing interests

None declared

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