COMMENTARY

Pharmacist prescribing: What are the next steps?

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In countries all around the world, particularly those with developed economies, health care and, more specifically, the underpinning health systems are in crisis. However, the fiscal costs of health care are only one part of the bigger and more concerning picture. There are a number of key issues driving policymakers' concerns about the viability of our health care systems, including the increased cost of new pharmaceuticals and other evolving technologies, the growing needs of aging populations, the impact of chronic diseases, and a significant work force crisis.[1]

Solutions to these issues will not come easily; however, what is clear internationally is that pharmacists can be key participants in the management of health care costs through their contribution to the informed and appropriate use of medications in the community. For example, in the United States, collaborative drug therapy management programs exist in more than 75% of states.[2] These programs allow qualified pharmacists working within a defined protocol to assume responsibility for performing patient assessments, ordering laboratory tests, and selecting, initiating, monitoring, and adjusting drug regimens. Recently, the Medicare Part D program expanded such opportunities for pharmacists through the funding of medication therapy management services.[3]

However, for pharmacists everywhere the question still remains as to how we will engage ourselves in the rapidly evolving health care agenda when as a profession we have our own challenges ahead in areas such as work force supply, remuneration for services, expansion of our professional roles, and provision of continuity of care.

Access to medicines. Access to the right medication for the right patient in a timely manner is paramount within modern health care systems, in which drug therapy is the most common health intervention. Significant changes over the last few decades in the way medications are supplied to the community, primarily through the use of fast and efficient forms of information technology, have improved access to prescription medicines for many consumers. However, this improvement in access has not been universal. Patients from rural and other underserved areas, those in long-term-care facilities, and those recently discharged from hospitals continue to encounter difficulties in accessing prescription medicines.

Medical practitioners, particularly those in primary care, are still the main prescribers within health care systems, and the international shortage of medical practitioners has affected access to prescription medicines in many communities. This serious problem has been highlighted, particularly in developed countries, as the burdens of chronic disease and aging populations threaten to cripple struggling health care systems.

It is clear that current prescribing arrangements do not fully meet community needs in terms of timely, cost-effective, and convenient access to prescription medicines. It is also increasingly clear that medicines should be provided to consumers by making the best use of professional expertise and scarce health resources. This assertion has driven the expansion of prescribing authority to a wider group of health professionals, including (but not limited to) nurse practitioners, physician assistants, optometrists, physiotherapists, and pharmacists.

Nursing in particular is a key example of a profession that has been successful in expanding its practice responsibilities. Nurses (including midwives) are, by far, the largest group of health care professionals across all areas of the health system.

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Their large work force numbers, broad scope of practice, and long history of advanced practice models and specialized practice have enabled them to provide a viable option to governments struggling under the stress of overstretched health care systems.

Pharmacists can learn from groups such as their nursing colleagues as they operate across the health care continuum. As a profession, pharmacists are generalists by training. However, pharmacy lacks the sheer numbers of practitioners that are in evidence in the nursing profession; hence, pharmacists' participation in clinical practice has been more limited. Pharmacists seem ideally suited to improve access to prescription medicines through prescribing, but taking the steps needed to make that happen has proven to be more difficult than we might have expected.

Prescribing and the scope of practice. The term *prescribe* refers to giving directions (oral or written) to allow the preparation and administration of a remedy to be used in the treatment of a disease. Therefore, it follows that a prescription—still often seen by patients and consumers as only a piece of paper—is an order for the preparation or administration of the remedy. However, prescribing is a very complex process that requires an informed decision about the treatment of choice for a particular patient.[4] Prescribing can be simply described as a four-step process. The first step is information gathering (e.g., medication history-taking). The second step is clinical decision-making (Is the medication appropriate for the patient?). The third step is the communication of prescribing information (to other health care professionals and the patient), and the fourth step is monitoring and follow-up (Is the treatment working?).[5]

There are many "generic" competencies (i.e., competencies shared across a variety of health professional groups) that relate to the four parts of the prescribing process. However, one key area of interprofessional difference—often the most controversial and emotive—is clinical decision-making. This is the area where professional scope of practice and the level of clinical training in diagnosis and clinical therapeutics come into play in a very real manner. For example, generally speaking, an ophthalmologist has a greater depth of knowledge of the eye than a pharmacist or, indeed, a general medical practitioner. It is this area of prescribing however, for broad-based professions such as pharmacy (and nursing), that makes credentialing, scope-of-practice, and training issues more complex. How can an individual practitioner's scope of practice be differentiated from that of the profession?

There is an increasing acceptance of the development and implementation of pharmacist prescribing models internationally.[6] However, despite the wide range of models developed around the world to support pharmacist prescribing, the lack of evidence surrounding the overall impact of these models on clinical practice and on patient outcomes is still a potential stumbling block to our progress. So, the bigger question remains: In a health system that already has a broad range of established prescribers, what value do pharmacists add by becoming prescribers?

The value of pharmacist prescribers. To answer the question posed above, perhaps a good place to start is by looking at what history tells us about the role of pharmacists. Traditionally, in the United Kingdom and many other parts of Europe, groups of tradespeople called chemists, druggists, and apothecaries performed quite similar tasks. Over time, apothecaries split from the chemists and druggists to become general practitioners, while the other two groups combined to become pharmacists. Therefore, moving into prescribing may be just a matter of returning to the beginnings of our trade.[7]

Pharmacists are valuable members of the health care team and among the most accessible health care providers. We have roles in health promotion, disease management, and medication review, with in-depth training in pharmacology, clinical therapeutics, and patient care—skills that are at present significantly underused. Prescribing medications is not a simple task; it requires significant expertise to apply medication therapy skills, but that is a type of expertise that pharmacists can develop.

The number and complexity of medications available to treat disease are growing exponentially. Our opportunities are not limited to medication reviews and disease management. The extension of prescribing authority to pharmacists has the potential to help optimize medication management and improve the continuity of patient care and patient access to medications. However, if pharmacists are granted the privilege to prescribe, whenever possible they must strive to avoid contributing to the problem of polypharmacy, with its inherent risks, and instead further the goals of rational treatment in collaboration with other health care professionals and prescribers involved in the patient's care.

The international landscape. Over the past two decades, pharmacists around the world have been prescribing an increasing range of medications. In a number of countries, including the United Kingdom, the United States, Canada, and New Zealand, pharmacists already can legally prescribe a range of medicines previously prescribed only by medical practitioners, with one of the most progressive and highly publicized examples being the expansion of prescribing rights to U.K. pharmacists (and other health care practitioners).[8]

In a 2005 review of the international pharmacy literature by Emmerton et al.,[6] the global development and implementation of pharmacist prescribing models were apparent. Eight models of practice were identified in the literature; their components are described in Table 1, which also lists a related model of delegated medication administration. These eight prescribing models demonstrate the potential breadth of practice and the capacity of pharmacists to initiate, modify, and monitor prescription medicine use with varying levels of autonomy.

In examining those models, however, it is important to understand that the term *independent* in this context is a reflection of the degree of responsibility for prescribing decisions made by the pharmacist. This means that an "independent prescriber" is independently and legally responsible for his or her prescribing decisions. The term *independent prescribing* does not mean the pharmacist prescriber practices independently of other members of the health care team. In fact, no prescriber is ever truly independent of the broader health care team, as everyone has some limits to his or her scope of practice and requires a referral pathway to others who can assist with patient care.

Despite a range of currently recognized models internationally and support for pharmacists' prescribing by government and by pharmacy organizations and other health professional groups, there is still a significant lack of evidence in the literature demonstrating the impact of these models on clinical practice and patient outcomes.[9] However, what is clear is that offering a range of prescribing models will allow individual practitioners to take more responsibility for their decisions, as is appropriate for their skill level and qualifications, within the context of their scope of practice.

Key issues. Robust practice models are a cornerstone of the pharmacist prescribing agenda moving forward, yet a number of critical issues need to be addressed before extensive implementation can occur; these include issues of work force capacity, training and credentialing (e.g., scope of practice), remuneration for services, access to and sharing of medical records, local and national legislation, and professional indemnity. While almost all of these issues are faced by all prescribers, one issue—the potential for conflicts of interest—is of particular importance to pharmacist prescribers.[10]

As pharmacists, we consider our role in medication safety to be a very important one, as we perform a pivotal role by providing a first or second check on prescribing by other health care practitioners to help ensure that the right medication is provided to a particular patient. Because we have played this role for decades, it was inevitable that the issue of conflict of interest as it pertains to pharmacist prescribing would be raised.

Beyond the obvious need for pharmacists to have an independent double check on any prescribing they do, the more controversial issue surrounds the potential pecuniary interest a pharmacist prescriber might have (particularly in a community or retail pharmacy setting). Even taking a step back to a corporate model in which prescriber and dispenser are both employed within the same corporate structure, a financial "moral hazard" still exists. The solution to the issue of pecuniary interest is not palatable to many pharmacists, as it will in essence significantly limit a more expanded scope of prescribing (e.g., independent and supplementary) to areas outside community pharmacies.

Pharmacy will be scrutinized closely when it comes to managing conflict-of-interest issues surrounding the prescribing process. It will be essential that pharmacists' rhetoric about medication safety and the pecuniary interests of other health care professionals is applied to our own practices regardless of how that may affect the scope of our prescribing. In fact, the judicious management of these conflicts of interests will have a positive effect on how other health care professionals, particularly our medical colleagues, view pharmacist prescribers' expanded role in medication use and patient care.

Future directions. A key issue for pharmacists if we are to move forward as prescribers will be to transcend the "we-should-prescribe-because-we-know-more-about-drugs" argument; that is, we should not assume we could or should be able to become prescribers just because we know more about drug therapies. It is essential that we as a profession actually acknowledge that there is more to prescribing than just issues of therapeutics. We must recognize that there may be a need for further training for pharmacists to step into these roles. That said, however, we should not forget the value and strengths that we bring to the prescribing process through our knowledge of medications. It is more a question of critically examining where pharmacist prescribers would be best placed within the health care system, and where they can provide the greatest value, while managing issues related to their scope of practice and conflicts of interest.

The challenge will be to determine our own futures, recognize the value that we can add to the health system, and achieve this by working more collaboratively with medical practitioners and policymakers. However, there are a number of things that we can learn from the path of other health care professionals, including nurses, podiatrists, and optometrists, and from established groups of pharmacist prescribers in other countries.

For pharmacists to assume an increased role as prescribers, systems will need to be developed to facilitate the definition of scope of practice for individual practitioners. However,

Table 1.
Authority or Responsibilities of Pharmacists Under International Pharmacist Prescribing Models[5]

Model	Recognize Symptoms or Diagnose	Select Therapy	Supply and Administer Therapy	Initiate Therapy
Independent prescribing	Full	Full	No	Full
Collaborative prescribing	Diagnosis, initial treatment decision by medical practitioner	Yes	No	Yes
Supplementary prescribing	Diagnosis, initial treatment decision by medical practitioner	Per agreed patient-specific management plan	No	Per agreed patient-specific management plan
Patient referral	Diagnosis, initial treatment decision by medical practitioner	Diagnosis, initial treatment decision by medical practitioner	No	Diagnosis, initial treatment decision by medical practitioner
Formulary	Per list of approved treatable symptoms	Per preapproved formulary according to symptoms	No	Indirectly per preapproved formulary
Protocol	Per list of approved treatable symptoms	Preapproved medication according to symptoms	Yes	Per protocol-driven symptoms
Patient group direction	Per list of approved treatable symptoms	Written direction under preapproved protocols	Supply and administration written direction under preapproved protocols	No
Repeat prescribing (continuance)	Diagnosis, initial treatment decision by medical practitioner	Diagnosis, initial treatment decision by medical practitioner	Only supply sufficient medication until next appointment	No
Administration	Per list of approved treatable symptoms	Per preapproved formulary according to symptoms	Only administer for immediate treatment	No

we will not be turning our backs on our foundational knowledge of the appropriate use of medicines, as this is our best bargaining chip. Rather, we must strengthen our position as prescribers by targeting our skills to particular areas of practice. This will likely include focusing on patients with disease states that require complex medical treatments (e.g., HIV infection and AIDS, chronic pain, diabetes, hypertension, cancer).

As a profession, we should not presume that prescribing will be a core skill for all pharmacists but acknowledge that key foundations will exist within their professional training that will help them develop the necessary skills for prescribing. It is likely that specialist practitioners (i.e., pharmacists with advanced training) will become the pharmacist prescribers of tomorrow. This will be a good thing for the profession, as it will provide another career path for pharmacists who want to be more engaged in medication management and patient care. Pharmacists are being produced from universities throughout the world in record numbers and with a greater skill base than ever before. It would be a travesty to fail to provide career opportunities to allow interested graduates to use their skills to full advantage.

A logical next step. Many new opportunities await the pharmacists of the future—and prescribing should be one of them. It is a logical step to use the capacity and expertise of the pharmacy work force to improve access to prescription medicines via

Monitor and Modify Therapy	Start Therapy	Continue Therapy	Discontinue Therapy	Supervise Therapy
Full	Full	Full	Full	Independently
Yes	Yes	Yes	Yes	Collaboratively by nominated individual independent prescriber
Per agreed patient-specific management plan	Per agreed patient-specific management plan	Per agreed patient-specific management plan	Per agreed patient-specific management plan	By nominated individual independent prescriber
Management of specific therapy or therapeutic outcome	Management of specific therapy or therapeutic outcome	Management of specific therapy or therapeutic outcome	Management of specific therapy or therapeutic outcome	Delegated by nominated individual independent prescriber
Criteria for referral	Duration as per preapproved formulary	Duration as per preapproved formulary	Duration as per preapproved formulary	Indirectly according to preapproved formulary
According to preapproved protocol	According to preapproved protocol	According to preapproved protocol	According to preapproved protocol	Prescribing delegated by independent prescriber
No	Yes	No	No	Delegated under preapproved conditions and protocols
No	No	Previously prescribed medication only; no modification	No	Delegated under preapproved conditions
No	According to preapproved protocol	No	No	Delegated under preapproved conditions and protocols

pharmacist prescribing. It seems the climate is right for pharmacists to move forward and expand our professional roles by embracing a future that includes prescribing.

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