The evolving role of pharmacists: Moving towards medication therapy management to provide enhanced patient care services

Pharmacists’ scope of practice is shifting from a traditional dispensing role toward improving patient health outcomes. A framework called the Blueprint for Pharmacy outlines a future of pharmacy practice in Canada that is focused on improving drug therapy outcomes of Canadians through patient-centred care. For example, various provinces in Canada have introduced new models of funding for medication reviews and medication management. This issue of the Translator highlights various aspects of medication therapy management:

- Understanding pharmacists’ preferences toward providing patient-centred services
- Ten years of providing medication therapy management: Pharmacists identify and resolve drug therapy problems
- A review of remuneration models for pharmacists’ clinical care services: An essential part of integrating medication therapy management into pharmacy practice
- The Asheville Project: Pharmacists improve diabetes management within a medication therapy management model


Understanding pharmacists’ preferences for providing patient-centred services


**Issue:** Pharmacists wanting to provide patient-centred services in their pharmacy are often faced with several challenges, including a lack of reimbursement, workplace constraints and resistance from patients and physicians. The Blueprint for Pharmacy outlines the need for pharmacy to become more patient-centred; however, pharmacy practice is not as focused on patient health outcomes as it could be.1 A better understanding of pharmacists’ preferences for patient-centred services would be useful to improve the uptake rate of direct patient care services in community pharmacies.

**A solution:** A discrete choice experiment was used to survey pharmacists’ own preferences toward patient-centred services including medication therapy management (MTM) and chronic disease management (CDM). Pharmacists chose job satisfaction and personal income as the 2
Understanding pharmacists’ preferences for providing patient-centred services (cont.)

most important attributes for providing patient-centred services. Most pharmacists did not favour traditional dispensary services — such as dispensing and compounding — where the focus was on filling prescriptions. Pharmacists indicated a preference towards providing MTM and CDM services, but did not show interest in screening services. Education and training should be provided as a weekly CDM course or monthly paid preceptorship rather than an hourly seminar. Payment should occur through a professional service fee, such as $100/hour paid to the pharmacy.

Implications: Understanding pharmacists’ preferences is an important step in guiding health policy that promotes patient-centred employment opportunities that are aligned with pharmacists’ career aspirations. This study is one of the first to quantify pharmacists’ preferences toward non-dispensing services. Thus, employers can create positions that are forward-thinking, in line with future pharmacists’ desires and match the type of pharmacists to their preferred job experience. A limitation of this study is that due to the topic and voluntary nature of the survey, respondents may have been more motivated and biased toward providing patient-centred services. Overall, improving the uptake of patient-centred services must begin with government policy makers, pharmacy organizations and employers recognizing pharmacists’ career preferences and shaping future opportunities in the best interests of pharmacists.


Ten years of providing medication therapy management: Pharmacists identify and resolve drug therapy problems


Issue: The inappropriate use of medications contributes to greater than 1.5 million preventable adverse events annually in the U.S.A. and is estimated to cost $177 billion USD.1 Approximately 3.2% of hospital admissions in the U.S.A. are caused by an adverse drug event and 76% are preventable.2 Medication therapy management (MTM) presents a promising solution to reduce drug therapy problems; however, more clinical, economic and humanistic data are needed to confirm the long-term effectiveness of pharmacist-led MTM care.

A solution: Core services of the MTM model include medication therapy review, personal medication record, medication-related action plan, intervention, referral, documentation and follow-up. Pharmacists applied these core services to over 12,000 patient-centred service options or 1 status quo option. Each scenario had a defined list of attributes describing the service, setting, education, fee, income and job satisfaction. Software was used in order to identify statistically significant differences in pharmacists’ humanistic, environmental and financial preferences toward patient-centred services.

Financial support: Funding was provided by a grant from the Canadian Foundation for Pharmacy and a trainee grant from the Canadian Institutes of Health Research and the Michael Smith Foundation for Health Research.

85% of patients had at least one drug therapy problem and 28% of patients required additional therapy.

Implications: Pharmacists can play a vital role in the health care team by providing MTM services. MTM seeks to enhance patient care by improving communication and collaboration among pharmacists and other health care professionals, in addition to empowering patients to optimize their medication use.1 This study demonstrates that pharmacists providing MTM services improved clinical outcomes for the patients, contributing to health care cost savings. Patient satisfaction with the program also rated very high. The MTM program developed in Fairview Health Services supports the idea that pharmacist-led MTM can be applied to many medical conditions and can provide long-term cost saving to the health care system.

A review of remuneration models for pharmacists’ clinical care services: An essential part of integrating medication therapy management into pharmacy practice


Issue: In Canada, an aging population, rise in chronic disease rates and increasing array of pharmaceutical therapies put pharmacists’ clinical care skills in growing demand. The rationale behind a move towards pharmacist-led chronic disease care and medication therapy management (MTM) is clear; however, remuneration for these services remains uncertain. Minimal consideration for business sustainability and lack of evaluating effect on outcomes remain major barriers to implementing clinical care remuneration models. This may explain why over 43% of community pharmacists provide patient care, but only 22% charge fees for enhanced services.

A solution: The goal of this review was to assist Canadian pharmacists in creating their own remuneration programs. Forty-nine articles were selected that provided descriptions of existing remuneration models for pharmacist clinical care services. The majority of remuneration came from government agencies, third-party payors and national or regional programs. The types of services remunerated included MTM, disease management and non-dispensing services. MTM service typically involved medication reviews, with a rate of pay ranging from $27 to $170 per review. Disease management programs usually treated a chronic disease state with payments ranging from $33 to $134 per visit. Non-dispensing services included counselling for over-the-counter products, resolving adverse drug reactions and contacting physicians, with payments ranging from $4 to $17 per intervention.

Five key points were identified to help Canadian pharmacists create a clinical care program:
1) Develop a remuneration model that pays according to the value of the service provided.
2) Create a plan to identify and address barriers.
3) Evaluate the remuneration system for economic and clinical outcomes.
4) Summarize the outcomes and communicate the results.
5) Launch a marketing campaign to show the benefits of and establish demand for the new services.

Implications: This review can help Canadian pharmacists recognize that a clinical care model is feasible, has potential cost savings and financial advantages. The successful uptake of clinical care services requires pharmacists who are innovative, highly trained and willing to embrace change. Thus, pharmacists may need to take a more active role in establishing clinical care by creating a funding model, developing a specialized service and integrating the service into their community pharmacy practice. Furthermore, physicians, nurses, pharmacists and patients can actively promote direct patient care, support expanding services, and advocate for governments and third-party payors to subsidize clinical care.

Background or research methods: A literature review of clinical care services provided by pharmacists was performed using a wide variety of online literature search engines. Articles were included if they involved a large group of pharmacists and the source of remuneration was a third-party payor. Patients paying for services and dispensing fees out-of-pocket were not included in this review. The search was performed by 1 reviewer, sorted by 2 independent reviewers, and disagreements were managed by a third independent reviewer. A panel of several pharmacy faculties reviewed the articles and presented conclusions.

Minimal consideration for business sustainability and lack of evaluating effect on outcomes remain major barriers to implementing clinical care remuneration models.

Financial support: Funding was provided by a grant from the Canadian Foundation for Pharmacy.
The Asheville Project: Pharmacists improve diabetes management within a medication therapy management model


**Issue:** An estimated 1.8 million Canadians have diabetes, and this number continues to rise.¹ Pharmacists provide care for patients with diabetes and can improve patient outcomes such as glycemic control and blood pressure.² However, research also indicates that such improvements tend to decline 3 months after an intervention has been completed.³ Thus, community pharmacists are ideally placed to reinforce the importance of diabetes management through ongoing consultations and follow-ups.

**A solution:** The Asheville Project was created through a collaboration of pharmacists, physicians, employers and the City of Asheville, North Carolina, to assess the effectiveness of community pharmacist-led pharmaceutical care services. Long-term clinical, economic and humanistic outcomes were assessed on the pharmacist-run medication therapy management (MTM) program for patients with diabetes. The intervention consisted of a consultation with a pharmacist certified in diabetes education. After discussion with the patient, pharmacists developed a care plan to set and monitor treatment goals, provided training for the blood glucose monitoring device and educated patients about adherence to their regimen.

Patients showed significant improvements in accepted diabetes and cholesterol indicators, including HbA1C, LDL-C and HDL-C levels, with over 50% of patients recording improvements with each pharmacist visit. After the first follow-up, A1C values decreased by 1.1% and the number of patients reaching an optimal A1C value (<7%) increased by 24.3%. Patients also showed a slight decrease in average LDL-C concentration of 4.2 mg/dL and increase in HDL-C of 1.1 mg/dL after their first follow-up. The economic outcome of the project demonstrated net cost savings due to a large reduction in insurance claims, resulting in direct medical cost savings of $1,622 to $3,356 USD per patient, per year.

**Implications:** The Asheville Project demonstrates that pharmacists can successfully implement and run a patient-centred, employer-payor–driven MTM program. This project provides inspiration for a new health care model where employers and public insurers can directly reimburse pharmacists for providing MTM programs.⁴ Today, the Asheville Project has expanded to include MTM services for patients with asthma, hypertension and dyslipidemia.⁵ Thus, pharmacist-led MTM services produce results — not only improved clinical outcomes for patients and increased satisfaction for pharmacy service providers, but also considerable cost savings to the health care system.


**Background or research methods:** In the year 1996, the city of Asheville, North Carolina, unveiled an employer-sponsored wellness program to provide pharmaceutical care services such as education and medication therapy management to patients with diabetes. Employees (and beneficiaries) from the City of Asheville and Mission-St. Joseph Health System were selected to form a group of 194 patients with diabetes who enrolled in this program at no cost. The City of Asheville group and Mission-St. Joseph Health System group baseline outcomes were measured for 2 years, one serving as a comparison group to the other, then the 2 groups were combined for the intervention to increase sample size. Long-term clinical and economic data were tracked before and after patient participation in the program. Community pharmacists in retail settings met with patients every 6 months for follow-up appointments.

**Financial support:** No external funding provided.

---

**Contributors**

Kalena Truong, BSc(Pharm) (candidate)
Marie-Anik Gagné, HBSc(Sc), MA, PhD
Peter Delanghe, BSc(Pharm) (candidate)
Philip Emberley, BSc(Pharm), MBA

**Reviewers**

Kelly A Grindrod, PharmD, MSc
Djenane Ramalho de Oliveira, PhD
Ross Tsuyuki, PharmD, MSc, FCSHP, FACC
Dale B. Christensen, RPh, PhD
Ken Austin, BA

**Contact Information**

Philip Emberley
Director, Pharmacy Innovation
Canadian Pharmacists Association

pemberley@pharmacists.ca
(613) 523-7877, ext. 220
1-800-917-9489

www.pharmacists.ca/research

---

The dissemination of this innovative publication is made possible in part through an unrestricted educational grant from Pfizer.