



the **Translator**

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

The expanding role of pharmacists in pain management

The Public Health Agency of Canada estimates that 17% of Canadian adults are currently living with some form of chronic pain that is often uncontrolled and threatening to their quality of life.¹ This statistic will undoubtedly grow as the population ages. In addition, research shows that this can severely impact the economy, costing the health care system over \$10 billion annually.² This issue of the *Translator* explores the diverse role of pharmacists in providing optimal pain management within an interdisciplinary team setting:

- Clinical and financial outcomes of a pain management clinic operated by a pharmacist clinician in New Mexico
- Contributions of a clinical pharmacist to the pain management of patients suffering from bone metastases within a palliative radiotherapy clinic
- A model for a pain management clinic led by the combined efforts of a pharmacist and a nurse
- The impact of education on promoting interprofessional collaboration in chronic non-cancer pain management

Clinical and financial outcomes of a pain management clinic operated by a pharmacist clinician in New Mexico

Dole E, Murawski M, Adolphe A, Aragon F, Hochstadt B. Provision of pain management by a pharmacist with prescribing authority. *Am J Health-Syst Pharm* 2007;64:85-89.

Issue: The Pharmacist Prescriptive Authority Act of 1993 allowed pharmacist clinicians in New Mexico to monitor, modify, and prescribe drug therapy with supervision by a physician. This allows certified “pharmacist clinicians” (PhC) with additional training requirements in physical assessment to become part of a collaborative team. Some examples include clinical practice settings such as anticoagulation, diabetes and hypertension clinics and pain management clinics,

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the latter of which has not received much attention. However, these services were not extensively utilized primarily because the prospect for generated revenue was thought

to be limited. For clinical pharmacy services to be sustainable, they must be both clinically valuable and cost-effective.

A solution: This study assesses the financial and clinical implications of a well-structured clinic in New Mexico aimed at medication management of patients, 90% of whom suffer from chronic non-cancer-related pain. The clinic was fully operated by a trained pharmacist clinician with the capacity to

¹Reitsma M, Tranmer J, Buchanan D, VanDenKerkhof E. The prevalence of chronic pain and pain-related interference in the Canadian population from 1994 to 2008. *Chronic Dis Inj Can* 2011;31(4).

²Chronic Pain Association of Canada. Pain Facts. Edmonton (AB). Available: www.chronicpaincanada.com (accessed May 17, 2012).

The Translator is an initiative by the Canadian Pharmacists Association to support the knowledge translation between pharmacy practice research and health policy. Each issue features a number of pharmacy practice research articles, briefly summarizes them and discusses the health care policy implications. These articles are submitted by researchers who have a strong desire to support evidence-based health care policy and best practices.

Clinical and financial outcomes of a pain management clinic operated by a pharmacist clinician in New Mexico (cont.)

prescribe drugs, including controlled substances, and the expertise to ensure medication safety. The clinic's degree of success was assessed by monitoring four specific and measurable outcomes: 1) clinical value, 2) medication safety, 3) generated revenue, and 4) avoided costs. Although the clinic had two months to prove to be a feasible idea, it was fully functional and self-sufficient within a month. Not only did it prove to be an effective strategy for alleviating the pain level of registered patients, while generating

revenue, but it also relieved physicians from a heavy workload.

Implications: Despite the opportunity given to pharmacists in New Mexico to attain advanced training and to play a more active role in patient-focused care, many pharmacists were restricted to dispensing services as other clinical services were not thought to be viable. However, this study provides an example of a pain management clinic that proved to be successful and was fully

operated by a pharmacy clinician. Barriers pertaining to cost, time and space limitations, obtaining support, and billing procedures were overcome by a well-structured model that was monitored consistently. The achievements of the clinic proved to be innovative in illustrating the potential of a pharmacist in the following areas: 1) in a clinical setting; 2) as a mid-level provider; 3) in medication safety and management; 4) in physical assessment; and 5) in prescribing medication.

Background or research methods: The pain management clinic was operated by 1 pharmacist clinician in collaboration with 10 physicians and 1 nurse practitioner, with a patient base of 21,000. The pharmacist would spend approximately 5 hours a day directly dealing with patients, averaging 18 visits daily, and the remaining time would

be spent triaging prescription refills. The degree of patient chronic pain was documented for each visit using a 1 to 10 visual analog scale (VAS) system. Additional data addressed patients' sleeping habits, adverse drug reactions and a review of other medications used concomitantly. Any changes in VAS scores were recorded for the first

year, with all cases showing a reduction in pain scores after the initial visit ($p < 0.0001$, two-tailed t-test). Financial outcomes were tracked by taking into account the pharmacist's annual revenue and the sole cost of hiring the pharmacist, as no additional costs were required for operating the clinic, which ultimately generated a 9% profit.

Contributions of a clinical pharmacist to the pain management of patients suffering from bone metastases within a palliative radiotherapy clinic

Gagnon L, Fairchild A, Pituskin E, Dutka J, Chambers C. Optimizing pain relief in a specialized outpatient palliative radiotherapy clinic: contributions of a clinical pharmacist. *J Oncol Pharm Pract* 2011;18(1):76-83.

Issue: Approximately 25% of cancer patients eventually develop bone metastases (BM), an incurable stage often characterized by fractures, immobility and pain. Palliative radiotherapy (RT) is considered to be the primary form of pain management, although pain relief may be delayed, incomplete or short-lived. In addition, many BM patients experience concomitant symptoms or side effects that require complex medication regimens and consistent monitoring.

A solution: A multidisciplinary team approach that combines the unique expertise of health care professionals has proven to be efficient and popular among patients. Interprofessional collaboration that aims to improve the quality of life of patients with BM is ideal. This study explores the contributions of a clinical pharmacist (CP) to the Rapid Access Palliative Radiotherapy Program (RAPRP) in providing pain relief to

Of those patients assessed at week 4, 82.5% reported some improvement in pain while the proportion indicating no pain rose from 5% to 35%

BM patients. RAPRP patients were assessed by the CP who performed a complete evaluation of medication history, other forms of therapy and potential allergies. The evaluation was used by the CP to identify unmet therapeutic needs and to provide necessary counselling. Other CP duties included communication with health care providers and guiding eligible patients with financial barriers to medications through a supplemental coverage process. Of those patients assessed at week 4, 82.5% reported some improvement in pain, while the proportion indicating no pain rose from 5% to 35%.

Implications: Cancer pain is best managed by appropriate pharmacotherapy and multidisciplinary supportive care. Patients and their families agree that a health care setting that promotes interprofessional collaboration allows them the advantage of multiple assessments and customized feedback. In particular, expertise in medication management, outcome monitoring and patient education make the role of CPs in alleviating the pain of bone metastases patients of crucial value. Also, access to a CP contributes to the likelihood of keeping patients in the comfort of their own home during treatment, although that may increase the burden on family members. In addition, the efforts of CPs in this setting may minimize hospital admissions, reduce patients' financial costs and relieve other health care providers of clinical overload.

Background and research methods: The role of the CP in the RAPRP was developed by a pharmacist with extensive experience in palliative care and knowledge of the benefits of interprofessional collaboration in a health care setting. The CP was involved in the assessment of all outpatients. The Edmon-

ton Symptom Assessment System was used as a rating scale to evaluate patients' symptom burden based on 9 categories. Other tools used to assess the degree of functional impairment include the Palliative Performance Scale and the Karnofsky Performance Scale. Cancer pain may be associated with

complex syndromes that can be classified by the Edmonton Classification System for Cancer Pain, which can then be used to predict the success of pain management. Based on these findings, appropriate measures were taken and follow-up sessions were conducted at weeks 1 and 4.

A model for a pain management clinic led by the combined efforts of a pharmacist and a nurse

Hadi M, Alldred D, Briggs M, Closs S. A combined nurse-pharmacist managed pain clinic: joint venture of public and private sectors. *Int J Clin Pharm* 2012;34:1-3.

Issue: The increasing prevalence of chronic pain is becoming a major issue that poses a number of health threats both to patient populations and society. Some of these concerns include decreased patient activity and productivity, overburden on health care providers, overutilization of health care resources and elevated drug costs. Therefore, chronic pain management is complex and often requires the efforts of a multidisciplinary team. Despite their documented effectiveness, multidisciplinary chronic pain management clinics are not very common, primarily due to limited financial support and low interest from health care providers.

A solution: To meet the increasing demand for primary care services and to ensure opti-

... chronic pain management is complex and often requires the efforts of a multidisciplinary team

mal health care delivery focused on multidisciplinary collaboration, the roles of some health care providers are being expanded. In particular, the contributions of nurse-led interventions in chronic pain management have been documented in literature. Similarly, the research evidence supports the role of pharmacist-led interventions in chronic pain management. Therefore, this paper describes a combined nurse-pharmacist managed pain clinic.

Implications: This paper reiterates some of the conclusions from other studies that have explored the impact of a pain clinic on patient health and the health care system. Some of this research has demonstrated the role of a nurse-pharmacist clinic in reducing patient pain reports and minimizing the need for referrals, consequently lowering the burden on secondary care. It also emphasizes the potential for nurse-pharmacist collaboration and highlights a successful public-private sector partnership in the delivery of such health care services.

Background or research methods: The clinic comprises a clinical nurse specialist, trained for pain management at a hospital clinic, and a community pharmacist who attends the pain clinic once a week. The nurse specialist begins by administering the Brief Pain Inventory to evaluate the severity of pain and the Hospital Anxiety and Depres-

sion Scale, which assesses affective state. The pharmacist conducts full medication use reviews, explores issues with adherence while providing any necessary advice, and checks for drug interactions and adverse effects. The nurse is responsible for educating patients and preparing them for self-management of pain. Together, the phar-

macist and nurse devise a treatment plan, make all necessary recommendations to the physician and schedule a follow-up visit. The clinic receives over 200 patients a year, requiring an average of 4 sessions each, with each session lasting 30-40 minutes.

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The impact of education on promoting interprofessional collaboration in chronic non-cancer pain management

Allen M, Macleod T, Zwicker B, Chiarot M, Critchley C. Interprofessional education in chronic non-cancer pain. *J Interprof Care* 2011;25:221-222.

Issue: It is estimated that 25% of all Canadians are affected by chronic non-cancer pain (CNCP). Despite the paucity of evidence for the long-term effectiveness of opioids in CNCP, they are often prescribed for this indication. However, because of their potential for addiction, opioid drugs are strong candidates for abuse. It is difficult to define the optimal regimen of opioids in treating CNCP, but there have been concerns of over- and under-prescribing. In addition, deaths have been attributed to opioid overdose.

A solution: Considering the different roles of health care professionals in managing CNCP, interprofessional education (IPE) should clarify individual duties and facilitate collaboration. This study provided IPE to physicians, dentists, and pharmacists about management of CNCP, emphasizing the appropriate use of opioids, indications for referral to addiction services, use of services of the provincial prescription monitoring program, and need for interprofessional communication.

Implications: Overall, participants were very satisfied with the content and format

All three professions reported improved self-efficacy after the program, with pharmacists improving the most

of the program. However, dentists and pharmacists rated the opportunity for discussion and applicability to practice lower than physicians. All three professions reported improved self-efficacy after the program, with pharmacists improving the most. This may have been partly because they started at a lower level of self-efficacy than physicians and dentists. The greatest gain in self-efficacy for all three professions was in contacting the prescription monitoring program for help with monitoring their practice. In focus groups, physicians did not report any increase in communication, though pharmacists reported greater confidence and more frequent contact with dentists and physicians. Pharmacists also reported greater use of the prescription monitoring program, though this was not confirmed by data from the monitoring program because few participants gave consent for analysis of their practice data. Dentists

did not report increased use of the program, perhaps because they refer patients seeking opioids to their family physicians.

The project revealed some of the difficulties engaging different health care professionals on a topic that some consider sensitive because of the publicity about opioid use. Few participants gave consent for their practice data to be analyzed. Pharmacists and dentists were able to communicate easily with each other, because they shared tables at the workshops, while physicians sat together at their own table. In subsequent workshops, the researchers used assigned seating to ensure a mix of professionals at each table. They also modified the cases to make them more relevant to dentists and pharmacists and to engage them more fully in discussion. Lessons learned from this workshop have helped develop and implement other community-based workshops involving physicians and pharmacists to promote collaboration between these two professions.

Background or research methods: Following a needs assessment involving physicians, dentists, pharmacists and CNCP patients, an accredited case-based workshop was attended by 54 members of the three professions. Participants were surveyed on

their satisfaction with the course, pre/post self-efficacy in managing CNCP and self-reported changes in practice three months after the program. Also, two focus groups were conducted by phone and analyzed separately by two researchers, who later dis-

cussed their findings. An attempt was made to detect changes in prescribing of opioids following the program, but no physicians provided consent for this analysis.

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Contributors

Mahmood El-sweisi, Pharmacy Student
Philip Emberley, PharmD, MBA

Reviewers

Ernest J. Dole, PharmD, FASHP, BCPS, PhC, CDE
Muhammad Abdul Hadi, BPharm, MPharm
David Phillip Aldred, BPharm(Hons), PhD
Jose Closs, PhD
Michelle Briggs, PhD
Michael Allen, MD, MSc
Alysa Fairchild, BSc, MD, FRCPC
Rosemary Killeen, RPh, BScPhm
Renée Dykeman, MA, ELS

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



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