

5.2 Country case study: Canada

Authors

Cooper J, Senior Director, Professional and Membership Affairs, jcooper@pharmacists.ca; Gagné, MA, Director, Research and Policy, mgagne@pharmacists.ca; Hogan K, Research Coordinator, khogan@pharmacists.ca; Mohr H, Project Manager, hmohr@pharmacists.ca; Canadian Pharmacists Association.

Summary

- The greatest human resources (HR) challenge in Canadian pharmacy also represents its greatest opportunity. The pharmacist's role in the delivery of health care is evolving from one focused primarily on dispensing medications to one emphasizing the provision of patient-centred, outcomes-focused care.
- Concurrently, the role of the pharmacy technician is advancing to support the changing role of the pharmacist.
- Canada's pharmacy workforce challenges can be best served by a comprehensive strategic action plan that manages the evolution of the pharmacist's role and aligns with the pharmacy service and pharmaceutical care needs of Canadians.
- The research findings and evidence-based recommendations from the Moving Forward: Pharmacy Human Resources for the Future initiative provide a strong base to support ongoing pharmacy workforce planning.[1]
- The Blueprint for Pharmacy initiative is the pharmacy sector's ongoing process to better align the profession with the health care needs of Canadians, and to achieve the Vision for Pharmacy: "Optimal drug therapy outcomes for Canadians through patient-centred care." [2]
- This case study presents examples of some of the initiatives that are collaboratively achieving the Vision for Pharmacy, by addressing some of Canada's pressing pharmacy HR challenges and building on the evidence gathered by the Moving Forward initiative.

5.2.1 Background

Canada's pharmacy workforce includes licensed pharmacists and unregulated pharmacy technicians. Canada has approximately 30,000 pharmacists in its provinces and territories, and likely more than double that number of pharmacy technicians. [3,4] Seventy-two percent of Canada's pharmacists work in

community pharmacies; while 16% work in hospitals. The remainder works in academia, government, industry, health clinics or other settings.[3] There are more female pharmacists than males. The average age of pharmacists in Canada ranges across provinces from 37.3 to 44.6 years.[5] The current minimum education requirement for entry-to-practice is the Baccalaureate degree in pharmacy (four years in length plus a prerequisite of one additional year of pre-pharmacy education). Canada has ten schools of pharmacy which reported a total of 1,036 students in their fourth and final year of study in 2008-2009.[6]

Pharmacy practice in Canada has evolved throughout the years to include specialized medicines distribution services, medicines information, clinical pharmacy services and pharmaceutical care within collaborative and interdisciplinary teams.

5.2.2 Health Human Resource Challenges in Canada

One of the most urgent issues facing Canada's health system today is the appropriate management of health human resources (HHR), ensuring that the right health care providers with the right skills are available in the right place at the right time. Following the federal, provincial and territorial (FPT) governments' First Ministers' Accord on Health Care Renewal in 2003, substantial resources have been committed to support health care renewal initiatives across Canada.[7] As stated by the Health Council of Canada, "without an appropriate health human resources strategy, all other health care renewal efforts would fail." [8]

Canada has universal, publicly-funded health care, delivered and regulated at the provincial and territorial level. Coverage of prescription drugs and pharmacy services are, however, a mix of public and private funding. Traditionally, HHR planning efforts have focused on the supply of, and demand for, health care providers whose services are paid for by the public purse – primarily physicians and nurses.[9,10] The contribution made by other providers whose services are delivered, in part or in whole by the private sector, is now being recognized. Canadian FPT governments have specifically identified seven health professionals, including pharmacists, as high priority for HHR planning.[11] This focus led to federal government funding of Moving Forward: Pharmacy Human Resources for the Future, a wide ranging pharmacy HR research and con-

sultation initiative recently completed by the Canadian Pharmacists Association (CPhA) as well as a national pharmacist database.

The 2007 Framework for Collaborative Pan-Canadian HHR Planning lays out a national approach for health care stakeholders to mobilize their efforts and resources to support better HHR planning.[12] It is recognized that a coordinated HHR strategy should take a needs-based planning approach to HHR: one that anticipates the current and emerging population health needs of Canadians and considers health system design.[13]

5.2.3 Key issues

Pharmacy workforce planning

Pharmacy workforce planning decisions must be based on firm evidence. However, data on even the basic supply and demand of pharmacists and pharmacy technicians has been lacking. As the role of the pharmacist in the delivery of health care continues to evolve, efforts to predict Canada's future pharmacy HR requirements will depend on a broader understanding of the population's needs for pharmacy services, and how these needs can be met through new models of pharmacy practice.

An evolving pharmacy workforce

Canada's health care system is moving towards a preferred future where health promotion, disease prevention, and chronic disease management will be the cornerstones of health care, which will be delivered collaboratively by inter-professional teams. Pharmacists, as medicines experts and Canada's most accessible health care professionals, are critical components of these teams. Canada is making a great deal of progress in facilitating the participation of pharmacists in team-based health care, thereby improving the safe and effective use of medicines.[14]

All provinces in Canada are exploring scope of practice and other legislative changes that will allow pharmacists to better focus on management of medication therapy. In 2007, the province of Alberta implemented the broadest scope of pharmacist practice in Canada by granting authority to prescribe independently and inject drugs.[15] Other Canadian provinces have followed, most recently the province of Ontario which announced legislation in 2009 that will allow pharmacists

to administer drugs; extend, adapt or adjust prescriptions; and order laboratory tests for the purpose of medication monitoring and management.[16]

Recruiting and retaining the pharmacy workforce

Both hospital and community pharmacy employers continue to report difficulties in recruiting pharmacists. To develop strategies for recruiting and retaining pharmacists in a competitive marketplace, the health care sector is examining the factors that affect health workers' satisfaction and influence their workplace behaviour.

The Moving Forward initiative identified many workplace factors which bring pharmacists satisfaction. Activities which increase their level of direct patient care and allow them to employ the full scope of their expertise are most often cited. [17] Canada's pharmacy students fully expect to be compensated in a manner reflecting the amount of patient care and cognitive services provided.[18] Evidence also suggests that pharmacy technicians derive satisfaction from advanced tasks.[19] Additional research is needed to determine links between elements of satisfaction and pharmacists' and pharmacy technicians' career decisions. This information will help the pharmacy employers create attractive practice environments and allow pharmacists and pharmacy technicians to be deployed where they can contribute the most to patients' health outcomes.

As more collaborative models of health care delivery evolve, the need for pharmacists and pharmacy technicians with the specific skills and expertise for expanded practice will also increase. The challenge is to identify, attract and select the candidates with the requisite skills, all within a competitive pharmacy workforce market.

Recruitment and retention are inexorably linked with compensation. In the community setting, the issue of appropriate compensation to pharmacies for the provision of pharmacy services (both dispensing and professional services) is an issue of debate. Many studies have demonstrated that pharmacies are not adequately compensated for dispensing medication, yet some governments are reducing the professional allowances available to pharmacies, which have been historically used by pharmacies to subsidize their dispensing services in spite of compensation gaps.[20-22] New models of compensation are being introduced or pilot-tested and evaluated in different jurisdictions.

International pharmacy graduates

An integral part of Canada's HHR strategy is reducing barriers to practise for internationally educated health professionals. At the same time, Canada should work towards becoming more self-sufficient in meeting its health care workforce needs.

An international pharmacy graduate (IPG) is someone who earned his or her undergraduate pharmacy degree in a country other than Canada or the United States. IPGs account for a substantial and growing percentage of the pharmacy workforce. In Ontario alone, 44% of all newly licensed pharmacists are IPGs, while 29% of all licensed pharmacists are IPGs.[23] For many IPGs, there can be a large gap between their pharmacy experience and training and the expected standards of practice in Canada.[24] The current evolution of the pharmacist's role in Canada also adds another layer of complexity.

5.2.4 Strategies

Increasing the pharmacy human resources planning evidence base

The Moving Forward initiative produced over ten technical research reports and a final report of 36 evidence-based recommendations for pharmacy workforce development.[25] Moving Forward also concluded that the key to addressing Canada's pharmacy human resource challenges lies in creating a clear vision and a cohesive plan for changing pharmacy practice to better align with the needs of patients and the health care system. These reports can be accessed at www.pharmacyhr.ca.

Establishment of a national pharmacist database

The identification of pharmacists as a priority health profession led to the development of a national pharmacist database (PDB) by the Canadian Institute for Health Information (CIHI). The PDB collects information provided by the provincial and territorial pharmacy regulatory authorities, and includes workforce demographics such as numbers of practicing pharmacists, practice setting, education, age and gender. The PDB marks the first standardized collection of pharmacist workforce information in Canada, and represents a major achievement in pharmacy human resource planning. In December 2008, CIHI released its second annual PDB report.[26]

Creating innovative pharmacist roles as a recruitment strategy

Many government initiatives have supported the integration of pharmacists into collaborative health care teams. A multi-site demonstration project known as IMPACT (Integrating Family Medicine and Pharmacy to Advance Primary Care Therapeutics) is a landmark project that provided clear evidence of the benefits of a pharmacist on a primary care team.[27] Capitalizing on the novel opportunities offered by innovative workforce roles is a potential recruitment strategy. By carefully tailoring a recruitment strategy highlighting the unique opportunities associated with a primary care role, the IMPACT project was able to quickly attract a wide pool of candidates and ultimately hire the qualified candidates they were seeking.[28]

Pharmacists also participate in team-based care through primary care services within community pharmacies, specialty ambulatory clinics, medication assessment programs, or consultant team roles.[29] Two key projects demonstrating the impacts of some of primary care roles for pharmacists include the integration of 49 pharmacists into primary care networks in Alberta, and a new program under the Saskatchewan Ministry of Health integrating pharmacists into primary health centres.[30,31]

New models of compensation

In order to address compensation gaps, some certain provincial governments are now introducing pilot compensation mechanisms for the provision of professional pharmacy services. These include the new MedsCheck program in Ontario, a seniors' Medication Review Service in Nova Scotia, a remuneration program in British Columbia tied to prescribing, and potential payment models in Alberta.[32-35]

Application of information and communication technology to improve collaborative practice

Advances in information and communication technology support the increased integration of pharmacists into health care teams. These technologies encompass software applications, hardware, and communications tools used in distributive and medication management services.[36] Canada Health Infoway is leading the development of pan-Canadian interoperable electronic health records in partnership with FPT governments to facilitate improved health information access and collaborative care.[37]

Provincial drug information systems (DIS) or networks will enable authorized health care providers to view a patient's complete drug profile online, prescribe electronically and receive notification of drug interactions. These systems will help to reduce prescription errors and adverse drug events, improve clinical decision-making, and result in fewer clarification call-backs to prescribers, thus resulting in improved safety and effectiveness of services and performance of health care providers.[38] Canada's first provincial Drug Information System was rolled out in Prince Edward Island in 2009.[39] Lessons learned from the evaluation of this exercise will inform the implementation of DIS in other jurisdictions.

Advancing the roles of pharmacy technicians

Advancing the role of the pharmacy technician is also a valid strategy for mitigating the effects of pharmacist shortages and supporting expanded roles for pharmacists. Many pharmacy technicians are beginning to carry out some of the tasks traditionally in the exclusive domain of the pharmacist, particularly in the technical aspects of medicines distribution. Canada now has accreditation standards for pharmacy technician education programs, approved entry-to-practice competencies for pharmacy technicians, and many provinces have put in place the requirements to allow for the registration and regulation of pharmacy technicians.[40,41]

Improving the integration of international pharmacy graduates

Understanding and raising awareness of the issues and challenges surrounding the integration of IPGs into Canadian pharmacy practice is an important strategy.[42] The Moving Forward initiative specifically researches these issues and proposed eight specific recommendations to better integrate IPGs, including ensuring they are prepared for the formal processes and examinations they must undergo for licensure to practise and also supporting their continued professional practice after licensure.[43]

Developing a blueprint for pharmacy

Canada believes that fostering an environment that will enable pharmacists and pharmacy technicians to practise in expanded roles requires a clear vision and a cohesive plan for managing change within the pharmacy profession. The Blueprint for Pharmacy is a collaborative, pan-Canadian initiative led by the CPhA designed to move pharmacy practice forward. The Moving Forward initiative provided critical

evidence to inform the specifics of the Blueprint for Pharmacy's Implementation Plan, and its 36 final recommendations are very closely aligned with the actions in the Blueprint.

In June 2008, the Task Force on Blueprint for Pharmacy released the Vision for Pharmacy – a document describing a landscape where pharmacists and pharmacy technicians work to the fullest extent of their skills and knowledge to better achieve optimal drug therapy outcomes for Canadians through patient-centred care. In April 2009, the Task Force released the Implementation Plan for achieving this Vision, which identifies the essential steps, priorities, timelines, and leaders for carrying out the work.[44]

5.2.5 Outcomes

- Canada now has an annual report from the CIHI PDB, allowing comparisons over time on the supply and demographic trends of pharmacists in Canada.
- Several provinces are establishing formal primary care positions for pharmacists. For example, due to the success of the IMPACT project in Ontario, more than half of the province's 150 Family Health Teams have now hired a pharmacist.[45]
- Physicians are becoming more accepting of pharmacists as critical team members.[46] In a recent survey, family physicians themselves report collaborating more with pharmacists than with any other health care professional, with over 70% reporting some form of regular collaboration.[47]
- New compensation models for pharmacy services are being evaluated. While the general consensus is these models are a step in the right direction, there is strong feeling from the community pharmacy sector that off-setting compensation for dispensing by compensation for other services is not a sustainable business strategy, and may discourage the provision of collaborative health care services.[48]
- An Evaluation of Canada's first provincial Drug Information System has been completed, examining the impact on pharmacy workflow. Lessons learned are now being shared across jurisdictions.
- The Pharmacy Examining Board of Canada has developed a national entry-to-practice Qualifying Examination for the assessment and certification of the competence of pharmacy technicians.[49] The province of Ontario is a forerunner in advancing the role of pharmacy technicians,

with the Ontario College of Pharmacists ready to begin regulating pharmacy technicians as a distinct health profession by 2010.[50]

- All sectors of pharmacy in Canada have endorsed the common Vision for Pharmacy by agreeing to work collaboratively with other pharmacy stakeholders to achieve the Vision.[51] As the examples in this case study have shown, pharmacy leaders are now beginning to carry out the activities outlined in the Implementation Plan. The Vision for Pharmacy document and the Blueprint for Pharmacy Implementation Plan are available at www.pharmacists.ca/blueprint

5.2.6 Conclusion

The greatest human resources challenge in Canadian pharmacy also represents its greatest opportunity. The pharmacist's role in the delivery of health care is evolving from one focused primarily on dispensing medications to one emphasizing the provision of patient-centred, outcomes-focused care. Canada's pharmacy workforce challenges can be best served by a comprehensive strategic action plan that manages the evolution of the role of the pharmacy workforce in the delivery of care and leads to an alignment with the pharmacy service and pharmaceutical care needs of the Canadian population. As expanded roles for pharmacists and technicians become better integrated into Canada's health delivery system, Canada becomes better positioned to more accurately plan for the supply, education, deployment, recruitment, and retention of its pharmacy workforce.

References

1. Management Committee, *Moving Forward Pharmacy Human Resources for the Future. Final Report.* Canadian Pharmacists Association. September 2008. Available at URL: http://www.pharmacyhr.ca/files/eng/Moving_Forward_FINAL_REPORT_Rel_Nov_6.pdf (accessed 01.04.20).
2. Task Force on a Blueprint for Pharmacy. *The Blueprint for Pharmacy: the Vision for Pharmacy.* Canadian Pharmacists Association. June 2008. Available at URL: http://www.pharmacists.ca/content/about_cpha/whats_happening/cpha_in_action/pdf/BlueprintVision.pdf (accessed 01.04.20).
3. National Association of Pharmacy Regulatory Authorities. *National Statistics.* NAPRA. January 1, 2008. Available at URL: http://napra.ca/pages/Practice_Resources/National_Statistics.aspx (accessed 01.05.2009).
4. Management Committee, *Moving Forward Pharmacy Human Resources for the Future. The Pharmacy Technician Workforce in Canada: Roles, Demographics and Attitudes.* Canadian Pharmacists Association. March 2007. Available at URL: <http://www.pharmacyhr.ca/Articles/Eng/96.pdf> (accessed 01.04.20).
5. Canadian Institute for Health Information. *Workforce Trends of Pharmacists for Selected Provinces and Territories in Canada, 2007.* CIHI. 2008.
6. Association of Faculties of Pharmacy of Canada. *2007/2008 Enrolment Statistics – Personal Communication, Frank Abbott, Executive Director.*
7. *2003 First Ministers Accord on Health Care Renewal.* 5 September 2003. Available at URL: <http://www.hc-sc.gc.ca/hcs-sss/delivery-prestation/ftcollab/2003accord/index-eng.php> (accessed 20.02.2009).
8. Health Council Canada. *Health Care Renewal in Canada: Accelerating Change.* Health Council. January 2005.
9. Task Force Two: *A Physician Human Resource Strategy for Canada. Final Report. A Physician Human Resource Strategy for Canada.* Task Force Two. March 2006.
10. Steering Committee, *Building the Future: An integrated strategy for nursing human resource in Canada. Phase 1 Final Report.* Nursing Sector Study Corporation. May 2005.
11. Health Canada. *First Minister's Meeting on the Future of Health Care 2004 – a 10-year plan to strengthen health care.* Available at URL: <http://www.hc-sc.gc.ca/hcs-sss/delivery-prestation/ftcollab/2004-fmm-rom/index-eng.php> (accessed 20.02.2009).
12. Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources. *A Framework for Pan-Canadian Health Human Resources Planning.* Government of Canada. March 2007.

13. The Health Action Lobby (HEAL). *Core Principles and Strategic Directions for a Pan-Canadian Health Human Resources Plan. Discussion Paper.* March 2006.
14. Health Council of Canada. *Teams in Action: Primary Health Care Teams for Canadians.* April 2009.
15. Bacovsky R. *Provincial government initiatives for community pharmacist remuneration. Policy Reimbursement Advisor.* February 2009.
16. Ontario Ministry of Health and Long Term Care. *Press Release: Ontario Unleashes Potential in Health Care.* 11 May 2009. Available at URL: <http://news.ontario.ca/lopo/en/2009/05/ontario-unleashes-potential-in-health-care.html> (accessed 11.05.09).
17. Management Committee, *Moving Forward Pharmacy Human Resources for the Future. Pharmacy Human Resources Challenges and Priorities: Research Report.* Canadian Pharmacists Association. August 2008. Available at URL: <http://www.pharmacyhr.ca/Articles/Eng/125.pdf> (accessed 01.04.20).
18. Management Committee, *Moving Forward. Research Report.* August 2008.
19. Management Committee, *Moving Forward. The Pharmacy Technician Workforce in Canada.* March 2007.
20. British Columbia Pharmacy Association, Canadian Association of Chain Drug Stores. *BC Activity Based Costing Study Final Report – Study Findings and Analysis.* CACDS & BCPA. 2007.
21. MENTORx. *Costs of Ontario Community Pharmacy Services – 2008 (Final Report).* OPA & CACDS. 2008.
22. Locke W. *An Activity-Based-Costing Estimate for the Average Cost of Pharmacy Services in Newfoundland and Labrador and an Evaluation of the Real Cost of the Proposed Legislative Change to the Formulary Requiring a Manufacturer's Guarantee of Best Prices for Generic Drugs.* Pharmacists' Association of Newfoundland & Labrador (PANL). 2008.
23. James, S. Ontario College of Pharmacists. *Personal Communications.* May 2009.
24. Management Committee, *Moving Forward Pharmacy Human Resources for the Future. Integration of International Pharmacy Graduates into Canadian Pharmacy Practice: Barriers and Facilitators.* Canadian Pharmacists Association. January 2008. Available at URL: <http://www.pharmacyhr.ca/Articles/Eng/119.pdf> (accessed 01.04.20).
25. Management Committee, *Moving Forward. Final Report.* September 2008.
26. Canadian Institute for Health Information, *Workforce Trends of Pharmacists for Selected Provinces and Territories in Canada,* 2007. CIHI. 2008.
27. IMPACT: *Integrating Family Medicine and Pharmacy to Advance Primary Care Therapeutics.* Available at URL: <http://www.impactteam.info/impactHome.php> (accessed 20.04.09).
28. Babcock K, Farrell B, Dolovich L, Sellors C. *Hiring a pharmacist to work in primary care: application for ambulatory and hospital pharmacy.* *Can Pharm J.* 2006. 139(5).
29. Management Committee, *Moving Forward Pharmacy Human Resources for the Future. Innovative Pharmacy Practices: Volume II.* Canadian Pharmacists Association, August 2008. Available at URL: http://www.pharmacyhr.ca/files/eng/Innovative_Pharmacy_Practices_Volume_II_final.pdf (Accessed 01.05.09).
30. Bacovsky R., February 2009; Alberta Health and Wellness, *Pharmacy Pilot Project.* Available at URL: <http://www.albertapci.ca/AboutPCI/RelatedPrograms/Pages/Pharmacy.aspx> (accessed 20.04.09).
31. Bacovsky R. February 2009.
32. Ontario Ministry of Health and Long-Term Care. *MedsCheck: A healthy dose of information.* Available at URL: <http://www.medscheck.ca> (accessed 20.04.2009).
33. Pharmacy Association of Nova Scotia. *Nova Scotia Seniors' Pharmacare Program.* *Pharmacists' Bulletin.* April 2008. 8(4).
34. Ministry of Health Services (British Columbia). *Interim agreement between the Ministry of Health Services and the British Columbia Pharmacy Association.* December 2008. Available at URL: <http://www.health.gov.bc.ca/pharme/suppliers/ia.pdf> (accessed 01.05.2009).
35. Alberta Health and Wellness. *Alberta Pharmaceutical Strategy.* December 2008. Available at URL: <http://www.health.alberta.ca/documents/Pharmaceutical-Strategy-2008.pdf> (accessed 01.05.2009)

36. Task Force on a Blueprint for Pharmacy. *Blueprint for Pharmacy: Implementation Plan*. Canadian Pharmacists Association. April 2009. Available at URL: http://www.pharmacists.ca/content/about_cpha/whats_happening/cpha_in_action/pdf/Blueprint%20Implementation%20Plan%20Final%20-%20Consultation%20April%2020%2009.pdf (accessed 05.01.09).
37. Canada Health Infoway. Available at URL: <http://www.infoway.ca/lang-en/> (accessed 04.20.09).
38. Task Force on a Blueprint for Pharmacy. *Implementation Plan*. April 2009.
39. Canadian Association of Chain Drug Stores, Canadian Pharmacists Association, Prince Edward Island Pharmacists Association. *Overview of Prince Edward Island's Drug Information System: Cost-Benefit Analysis (PEI-DIS-CBA)*. CACDS. 2009.
40. Canadian Council for Accreditation of Pharmacy Standards. *CCAPP Standards for the Accreditation of Pharmacy Technician Training Programs*. CCAPP. November 2007 Available at URL: <http://www.ccapp-accredit.ca/> (accessed 20.04.2009).
41. National Association of Pharmacy Regulatory Authorities. *Professional Competencies for Canadian Pharmacy Technicians at Entry to Practice*. NAPRA. September 2007. Available at URL: http://napra.ca/pages/Practice_Resources/professional_competencies_for_canadian_pharmacy_technicians_at_ep.aspx (accessed 20.04.2009).
42. Management Committee, *Moving Forward. Integration of International Pharmacy Graduates*. January 2008.
43. Management Committee, *Moving Forward. Final Report*. September 2008.
44. Task Force on a Blueprint for Pharmacy. *Implementation Plan*. April 2009.
45. Bacovsky, R. Ontario Ministry of Health and Long-Term Care, *Family Health Teams and Nurse Practitioner-Led Clinics*. February 2009. Available at URL: http://www.health.gov.on.ca/transformation/fht/fht_mn.html (accessed 20.04.09).
46. Bacovsky, R. February 2009.
47. *Fast Facts: Interprofessional teams – Who are FPs working with?* Canadian Family Physician 2009. 55(385).
48. Task Force on a Blueprint for Pharmacy. *Implementation Plan*. April 2009.
49. Pharmacy Examining Board of Canada. *Pharmacy Technicians: Pharmacy Technician Qualifying Examination for Entry-to-Practice*. PEBC. May 2009. Available at URL: <http://www.pebc.ca/EnglishPages/PharmacyTechnicians/PTHomePage.html> (accessed 01.05.2009).
50. Ontario College of Pharmacists. *Regulation of Pharmacy Technicians*. Available at URL: <http://www.pebc.ca/EnglishPages/PharmacyTechnicians/PTHomePage.html> (accessed 01.05.15).
51. Task Force on a Blueprint for Pharmacy. *The Vision for Pharmacy*. June 2008.