

Moving Forward: Pharmacy Human
Resources for the Future
Final Report
September 2008



How to cite this document:

Management Committee, *Moving Forward: Pharmacy Human Resources for the Future*. Final Report. Ottawa (ON). Canadian Pharmacists Association; (2008).



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FINAL REPORT

September 2008



Dear Pharmacy Workforce Stakeholder,

We, the members of the *Moving Forward* Management Committee, are pleased to present the final report and recommendations of the *Moving Forward: Pharmacy Human Resources for the Future* initiative.

This report marks the culmination of the first federally funded, in-depth examination of the pharmacy human resources challenges faced by Canada and its health system. We hope that our findings, conclusions, and recommendations will enable stakeholders involved in planning pharmacy human resources for the future – including federal, provincial, and territorial governments, associations, health authorities, regulatory bodies, educators, and employers – to help ensure that Canada has a strong pharmacy workforce prepared to meet the health care needs of its population.

Moving Forward believes that 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, pharmaceutical care. At the same time, the role of the pharmacy technician is advancing in many ways to support the changing role of the pharmacist. The key to addressing human resources issues such as workforce shortages, recruitment difficulties, and unmet training needs lies in carefully managing this evolution toward innovative and expanded roles for the pharmacy workforce. Such careful management will allow the health system to use its available pharmacy human resources in the most effective way possible, which will in turn result in the best possible health outcomes for patients.

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This report contains 36 evidence-based recommendations for pharmacy human resources planning. We, the undersigned, fully endorse the recommendations described in this report, and agree to the need for the pharmacy profession to work together in their implementation. We encourage you, as an engaged stakeholder in the development and management of Canada's pharmacy workforce, to review this report and consider how your activities can contribute to the implementation of the recommendations described herein.

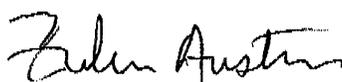
Sincerely,



Kevin Hall
Co-Chair for *Moving Forward*



Fred Martin
Co-Chair for *Moving Forward*



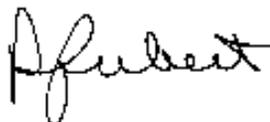
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GLOSSARY OF TERMS

ACHDHR	Advisory Committee on Health Delivery and Human Resources
ADPC	Association of Deans of Pharmacy of Canada
AFPC	Association of Faculties of Pharmacy of Canada
CACDS	Canadian Association of Chain Drug Stores
CADTH	Canadian Agency for Drugs and Technologies in Health
CAPSI	Canadian Association of Pharmacy Students and Interns
CAPT	Canadian Association of Pharmacy Technicians
CCAPP	Canadian Council for Accreditation of Pharmacy Programs
CHA	Canadian Healthcare Association
CMA	Canadian Medical Association
CNA	Canadian Nurses Association
CPhA	Canadian Pharmacists Association
CPTEA	Canadian Pharmacy Technician Educators Association
CSHP	Canadian Society of Hospital Pharmacists
FPT	federal, provincial, and territorial
HEAL	Health Action Lobby
HHR	health human resources
HRSDC	Human Resources and Social Development Canada
IPG	international pharmacy graduate
NAPRA	National Association of Pharmacy Regulatory Authorities
OCP	Ontario College of Pharmacists
OPQ	L'Ordre des pharmaciens du Québec
OSCE	objective structured clinical examination
PEBC	The Pharmacy Examining Board of Canada

EXECUTIVE SUMMARY

One of the most urgent crises facing Canada's health system today is the appropriate management of health human resources — that is, ensuring that the right health care providers with the right skills are available in the right place at the right time. Federal, provincial, and territorial health human resources planners and policy-makers have identified pharmacists as a high-priority health human resource. The members of this profession have key roles to play in delivering health care both now and in the future.

Many challenges impede current efforts to optimize the management of pharmacy human resources within Canada's health system. Reports of difficulties in recruiting and retaining pharmacists are common. The roles of pharmacists and pharmacy technicians in the delivery of health care are changing. International pharmacy graduates, who represent a significant and growing proportion of the workforce, need to be better supported in their efforts to practise pharmacy in Canada. A failure to address these challenges may compromise the ability of the pharmacy workforce to provide high-quality patient care.

The pharmacy sector must understand the underlying factors contributing to these pressures, describe the elements that must be considered in planning for future pharmacy workforce requirements, and develop evidence-based strategies for ensuring that Canada has a strong pharmacy workforce prepared to meet the future health care needs of its population. *Moving Forward: Pharmacy Human Resources for the Future* represents the Canadian pharmacy sector's response to these requirements.

Moving Forward: Pharmacy Human Resources for the Future was a collaborative research and consultation initiative managed by a committee of delegates from a partnership of eight national pharmacy organizations (the Management Committee). Funded by Human Resources and Social Development Canada's Foreign Credential Recognition program, this initiative involved a multi-pronged research and analysis program to gather qualitative and quantitative information on Canada's short-term and long-term challenges in the area of pharmacy human resources. Guided

by a National Advisory Committee of pharmacy stakeholders and a variety of expert working groups, *Moving Forward* produced a series of technical reports and papers analyzing various pharmacy workforce populations and issues. These detailed technical reports are available at www.pharmacyhr.ca, as is a Research Synthesis Report, which integrates and summarizes the project's key research findings.

Following the completion of the research and analysis program, the *Moving Forward* initiative brought together 64 pharmacy human resources planning stakeholders for a two-day National Dialogue on Pharmacy Human Resources in Toronto, Ontario, in March 2008. Participants had an opportunity to review key research findings and discuss human resources issues before validating and refining the strategies proposed by the *Moving Forward* Management Committee. There was a strong consensus that pharmacy human resources challenges are inextricably linked to the changing role of the pharmacist within health care delivery.

On the basis of this research and stakeholder consultation, *Moving Forward* proposes 36 actionable recommendations for consideration by the stakeholders involved in planning pharmacy human resources for the future — including federal, provincial, and territorial governments, associations, health authorities, regulatory bodies, educators, and employers. The *Moving Forward* partners believe that the implementation of these recommendations will help ensure that Canada has a strong pharmacy workforce prepared to meet the future health care needs of its population.

The recommendations are grouped under five themes:

- Communicating the Value the Pharmacy Workforce Contributes to Canadian Health Care
- Managing the Pharmacy Workforce
- Educating and Training the Pharmacy Workforce
- Regulating the Pharmacy Workforce
- Improving the Integration of International Pharmacy Graduates into the Pharmacy Workforce

Guiding Principles for HHR Planning

Health care stakeholders are mobilizing their efforts and resources to support better health human resources (HHR) planning, and the Moving Forward initiative has benefited from the wealth of HHR research and recommendations already tabled by the federal, provincial, and territorial governments, other health professions, and health care organizations. These resources included the March 2007 Framework for Collaborative Pan-Canadian HHR Planning, led by the Advisory Committee on Health Delivery and Human Resources (ACHDHR); the human resources studies and subsequently developed strategies of the physicians' sector (Task Force II) and the nursing sector (Building the Future); the Health Action Lobby Group (HEAL) Discussion Paper on the Principles of HHR Planning; and the Principles and Framework developed through the Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative.^{7,8,9,10,11}

The Moving Forward partners believe that, like health care delivery as a whole, HHR planning must be a collaborative, interdisciplinary activity. This underlying philosophy led to the development and adoption of a set of Guiding Principles for the initiative. These Guiding Principles were based on the HHR strategies, recommendations, and principles already developed by other health care sectors and professions and represented the shared HHR values of the Moving Forward stakeholders. They served as a foundation for all of the subsequent work of the Moving Forward initiative and as the starting point for the development of specific recommendations for pharmacy human resources planning.

1. A coordinated pan-Canadian HHR strategy should emphasize patient safety and high-quality care and 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. (con't 3)

PHARMACY HUMAN RESOURCES PLANNING

One of the goals of health human resources (HHR) planning is to ensure that the right health care providers with the right skills are available in the right place at the right time.¹ Over the past decade, HHR planning has been recognized by governments and health care providers across the country as a critical priority. As stated by the Health Council of Canada in its 2005 Annual Report to Canadians “without an appropriate health human resources strategy, all other health care renewal efforts would fail.”²

To varying degrees, all jurisdictions in Canada are dealing with HHR challenges, and pharmacy has been specifically identified as a profession needing attention in this regard. As stated in the 2003 First Ministers' Accord on Health Care Renewal:

Appropriate planning and management of health human resources is key to ensuring that Canadians have access to the health providers they need, now and in the future. Collaborative strategies are to be undertaken ... to ensure the supply of needed health providers (including nurse practitioners, pharmacists and diagnostic technologists).³

Traditionally, HHR planning efforts have been largely concerned with the supply of, and demand for, health care providers whose services are paid for by the public purse. However, there is now growing recognition of the contribution made by other health care providers whose services are delivered, in part or in whole, by the private sector. Some of these services may not be fully covered by provincial health insurance plans.⁴ Canada has close to 30,000 licensed pharmacists, making pharmacy the country's third largest health care workforce. More than 70% of Canada's

pharmacists are employed in community pharmacies.^{5,6} In this setting, human resources strategies relating to the compensation, recruitment, retention, performance, or workflow of practising pharmacists are tied to economic decisions aimed at maintaining a profitable business. If HHR planners and policy makers intend HHR planning efforts to truly meet population health needs, then the contribution of health care services delivered by the private for-profit sector must be considered in the planning process.

THE KEY TO ADDRESSING PHARMACY HUMAN RESOURCES CHALLENGES

The *Moving Forward* initiative has concluded that if Canadians are to receive the optimal health care that pharmacists and pharmacy technicians can provide, the health system — encompassing both public and private provision of care — must utilize its available pharmacy human resources in the most effective way possible. Canada is moving toward a future in which health promotion, disease prevention, and the management of chronic disease will be the cornerstones of health care, and that care will be delivered collaboratively by interprofessional teams of health care providers.¹² This shift will result in expanded and innovative roles for both pharmacists and pharmacy technicians that will take full advantage of their knowledge and skills. These new roles will lead, in turn, to a greater emphasis on patient-centred, outcomes-focused, pharmaceutical care.

Some of the emerging roles for pharmacists are now being integrated into practice, whereas others are just appearing on the horizon. Pharmacists are carrying out more activities relating to public health outreach, collaborative prescribing, chronic disease management, and other areas.^{12,13,14} If pharmacists are to successfully extend their role, an increased reliance on pharmacy technicians will

Guiding Principles for HHR Planning

- 2. Research and better data are needed to facilitate HHR planning to ensure a strong workforce to meet the present and future health care needs of Canadians.*
- 3. Health care professionals, governments, and other stakeholders should be open and committed to interdisciplinary or interprofessional care.*
- 4. Health care professionals should be afforded healthy and supportive working environments that address their professional and personal needs and are designed to optimize the delivery of patient care.*
- 5. Education and training of health care professionals should incorporate a pan-Canadian approach that supports interprofessional curricula and educational experiences.*
- 6. Health care professionals should be supported with opportunities to foster life-long learning through access to the resources they need to keep abreast of advances in scientific knowledge and to acquire new skills.*
- 7. Health care service delivery models and licensure/regulatory policies should allow providers to work collaboratively, to the full extent of their competencies and scopes of practice.*
- 8. Licensing and credential assessment requirements should facilitate mobility between provinces and territories for health care professionals.*
- 9. Assessment of credentials and skills should be led by the professions. Professional standards protect the public and should not be compromised in an effort to integrate foreign-trained health care providers.*
- 10. Qualified internationally educated health care professionals require support to meet licensing requirements and to effectively integrate into practice in Canada.*

(con't 4)

Guiding Principles for HHR Planning

11. *In the longer term, Canada should work to become more self-sufficient in meeting its health care workforce needs. Immigration policies and recruitment strategies should promote ethical recruitment from other countries.*

12. *Health care providers should be at the table to support needs-based HHR planning. Meaningful and ongoing engagement is needed to promote the exchange of information, best practices, and capacity-building among governments, health care professionals, and other stakeholders on cross-cutting HHR and policy issues. Consideration should be given to establishing a permanent, national HHR body to further support an integrated and effective approach to meeting the health care needs of Canadians.*

The Blueprint for Pharmacy

The Blueprint for Pharmacy is the pharmacy sector's response to a national call to better align the pharmacy profession with the health care needs of Canadians. It is a long term collaborative action plan for managing change within the pharmacy profession in Canada. In June 2008, the Task Force on a Blueprint for Pharmacy released the first milestone deliverable of this initiative - a common vision for the future of pharmacy in Canada: "Optimal drug therapy outcomes for Canadians through patient-centred care". The *Moving Forward* partners support The Vision for Pharmacy as articulated by the Blueprint for Pharmacy, and many of the *Moving Forward* recommendations have been integrated into the Blueprint implementation plan.

be critical. Already many pharmacy technicians are beginning to carry out tasks that were traditionally in the exclusive domain of pharmacists, and this advancement of the role of the pharmacy technician must proceed in parallel with changes in the role of the pharmacist.

Both the health system as a whole and individual Canadians need pharmacists to focus on their roles as medication managers and providers of pharmaceutical care, rather than on the dispensing of medications. Much of the current pharmacy workforce and many practice locations are coming to grips with what this changing focus means for day-to-day practice, continuing education and training, and the pharmacy business model.

Fostering an environment that will enable pharmacists and pharmacy technicians to practise in expanded and innovative roles, thereby allowing them to better meet the population's health care needs, requires a clear vision and a cohesive plan for managing change within the pharmacy profession in Canada. Although such a strategic plan is beyond the scope of the *Moving Forward* initiative, its recommendations have been structured with this goal in mind.

RECOMMENDATIONS FOR PHARMACY HUMAN RESOURCES PLANNING

If the challenges and issues impacting upon Canada's ability to effectively use its available pharmacy workforce are to be addressed, action is needed in a number of areas. The *Moving Forward* initiative proposes the following 36 key recommendations for action:

THEME 1

Communicating the Value that the Pharmacy Workforce Contributes to Canadian Health Care

1. ESTABLISH a vision for pharmacy based on patient and health system needs.

The human resources challenges facing pharmacy today call for solutions that go beyond addressing basic issues of supply and demand. Instead, these challenges must be addressed within the context of a larger strategic vision and action plan for the pharmacy workforce. This vision must allow for the creation of an environment that enables pharmacists and pharmacy technicians to practise to the full extent of their knowledge and competence in expanded and innovative roles.

As in other areas of health care, practice change is a fundamental aspect of human resources management in pharmacy, and a new vision for pharmacy that is based on patient and health system needs is intrinsic in developing effective solutions to pharmacy human resources challenges. This vision will guide future strategies designed to ensure that the right pharmacy workforce is available, where and when it is needed, to provide optimal care to Canadians.

2. INCREASE public and stakeholder awareness of, and support for, the vision for pharmacy.

The pharmacy sector must work to ensure that internal and external stakeholders understand, and believe in, the new vision for pharmacy. Pharmacists and pharmacy technicians must be made aware of the evolution in their roles that is under way, and the implications of this evolution for their future responsibilities and accountabilities. The public must be made aware of how pharmacists and pharmacy technicians can help them to achieve optimal health outcomes. Governments must be made aware of the necessity of their financial support in realizing this vision. Other health care providers will need to recognize the path that

the profession of pharmacy is taking, and to understand the ways in which the pharmacy workforce can optimize drug therapy and improve patient health outcomes.

3. DEMONSTRATE, through evidence-based research, the impacts of pharmacy practice on patient outcomes and on the effectiveness of the health system.

As the health system increases its reliance on collaborative health care delivery, new models of pharmacy practice, in which the pharmacist plays a more patient-centred role, are emerging. To support this evolution in health care delivery, a continuous stream of new evidence of the value of pharmacy practice, and pharmacy services, is required. The pharmacy sector's educational institutions, research networks, and professional associations must work together to develop an ongoing pharmacy practice research agenda which assesses the impacts of pharmacist interventions on patient health, as well as on the functioning of the health system as a whole. Research and evidence must be published, disseminated, and communicated appropriately to HHR planners and health care decision makers, so that new knowledge can be translated into policy decisions that support the practice of pharmacy. Patients, governments, and other health care providers must be assured that any changes being advocated by the pharmacy community do not merely reflect the desires of the profession; rather, they are necessary adjustments to improve the health outcomes of Canadians, supported by evidence.

4. COMMUNICATE how the pharmacy profession can address the health care needs of the population.

The pharmacy sector must collectively develop a national communications strategy to increase understanding of the value pharmacy contributes

to the health care of Canadians. This strategy should be based on the common vision for pharmacy, and supplemented by ongoing pharmacy practice research findings. Pharmacy leaders, with the assistance of pharmacists, pharmacy technicians, professional associations, and educational institutions have a responsibility to communicate the relevance of pharmacy in the delivery of health care services to Canadians, to governments, and to other health care providers.

THEME 2

Managing the Pharmacy Workforce

“Human resources management” typically means managing issues related to people, such as their recruitment, training, performance or satisfaction.¹⁵ Canada’s pharmacy workforce, or its pool of pharmacy human resources, includes both pharmacists and pharmacy technicians. Estimates suggest there are approximately 30,000 licensed pharmacists in Canada, and possibly more than double that number of pharmacy technicians.^{16,17} Demand for pharmacists is high, as signaled by reports describing the difficulties that many employers are facing in filling available pharmacist positions.^{18,19} Employers also report a growing demand for skilled pharmacy technicians.^{20,21}

Making the most of Canada’s available pharmacy human resources means using those resources effectively and appropriately. Canada is moving to a system in which health care is delivered by multidisciplinary teams of providers. Such collaborative care is intended to take advantage of the unique skills and expertise of different health care providers, and to enable the most appropriate provider to address the specific health needs of the patient. Ensuring that pharmacists and pharmacy technicians are appropriately integrated into models of collaborative care is an immediate strategy for managing pharmacy human resources requirements. In the longer term, HHR planners must determine how to ensure that an adequate pharmacy workforce, sufficient to meet the needs

of Canadians, is available and appropriately deployed.

5. IDENTIFY and MONITOR, on an ongoing basis, pharmacy workforce supply and demand indicators.

HHR planning decisions regarding future health workforce requirements must be based on firm evidence. One of the goals of Health Canada’s Pan-Canadian HHR Strategy is to enhance and strengthen the evidence base and capacity for coordinated HHR planning.²² Data related to even the basic supply of, and demand for, pharmacists and pharmacy technicians is currently insufficient.

The 2007 launch of the Canadian Institute for Health Information’s (CIHI) national pharmacist database was a major achievement in the collection of essential demographic information on Canada’s pool of practicing pharmacists. This database provides the necessary information to build a baseline understanding of the size and distribution of the pharmacist workforce, and will allow workforce trends to be monitored over time. However, the pharmacy community has yet to reach a consensus on identifying the most relevant indicators of pharmacy workforce supply and demand or how those indicators can be measured. And, as the role of the pharmacist in the delivery of health care continues to evolve, efforts to predict Canada’s future pharmacy human resources requirements will depend on a broader and more complex understanding of the population’s needs for pharmaceutical care and pharmacy services, and how these needs can be met through new models of pharmacy practice.

6. SUPPORT the adoption of technologies that enhance the efficiency and safety of drug distribution.

Pharmacists are responsible for ensuring the safety, security and integrity of the drug distribution



system; from the receipt of medications at the practice site through to their administration to the patient. In the future, pharmacists will spend more of their time providing pharmaceutical care to their patients, as regulated pharmacy technicians assume greater responsibility for the technical aspects of drug distribution. Adopting appropriate drug distribution technologies in pharmacy practice sites will support both pharmacists and pharmacy technicians in their future health care roles.

Drug distribution technologies designed to streamline and safeguard the dispensing process include robotics applications, automated dispensing systems and unit-dose packaging equipment. Although evidence shows that effective drug distribution technologies can reduce the rate of occurrence of medication errors, such technologies have not been widely adopted.²³ For example, in one survey of pharmacists, only half of respondents working in hospital settings and fewer than 12% of those working in community settings reported using automated dispensing cabinets.²⁴

From a human resources perspective, the introduction of new technologies that enhance drug distribution will change the day-to-day tasks of the pharmacy staff. These changes will in turn affect the pattern of work carried out by pharmacists, pharmacy technicians and other health care providers in the practice setting. The impacts these technologies will have on the pharmacy workforce will have to be carefully considered and managed.

7. SUPPORT the adoption and implementation of e-health technologies that enhance the ability of pharmacists to provide outcomes-focused, interdisciplinary care.

Electronic health information, and the systems by which it is transmitted, are intended to allow timely access to that information by the most appropriate health care provider. The pharmacist's ability to manage a patient's drug therapy (which can include prescribed and self-care medications), is enhanced by access to that patients' health information.²⁵ Complete patient drug profiles, records of prescriptions filled, diagnoses, laboratory data, and self-reported usage of non-prescription medications and supplements are examples of potential electronically-accessible health information that pharmacists should consider if they are to effectively exercise their professional judgment in optimizing the drug therapy outcomes of their patients.

E-health information systems will be critical technological vehicles for the interdisciplinary communication of patient health information. In addition to the need for wider adoption of these technologies, changes in health care policy and legislation will also be needed to facilitate the flow of information to all relevant health care providers, which will ultimately lead to a more informed approach to pharmacotherapy.

The pharmacy workforce, pharmacy employers, regulators and other stakeholders must recognize the benefits of e-health technologies and support their implementation in the workplace. Equally important, as new electronic formats arise to allow more wide-spread access to patient health information, health care providers must be involved in the development of these technologies to ensure that the challenges to both workflow and knowledge transfer between providers are accommodated.

8. SECURE funding for the adoption and implementation of e-health technologies.

The development of electronic health strategies is already funded to some extent through initiatives such as the Canada Health Infoway, and other provincial government programs. The pharmacy profession has been a leader for many years in using electronic health technologies and information systems that support patient care. Nonetheless, the financial investment required to realize systems that will be fully interoperable among all health care providers is substantial, and a critical gap in funding exists at the pharmacy level for both development and implementation. Federal, provincial and territorial governments must recognize and address this gap.

9. EVALUATE new and flexible funding models for patient care services that will be delivered by the pharmacy workforce of the future.

One of the most significant barriers to pharmacy practice change is the existing community pharmacy model of reimbursement, which is predicated on the dispensing of prescriptions. Under this model, pharmacies are reimbursed by patients, provincial drug plans, or other third-party payers for the medications they dispense. As such, their financial viability is largely dependent on the volume of prescriptions dispensed rather than on the level or appropriateness of pharmaceutical care that pharmacists provide. There is an overall perception that this product focus restricts many pharmacists from delivering care in a manner that is in keeping with the scope of their training and education.

If the health system is to benefit fully from the contribution that pharmacists can make

to managing drug therapy, then new financial models are needed, particularly in the community setting. These models must be flexible enough to allow for the reimbursement of pharmaceutical care and pharmacy services that are delivered in innovative ways, that facilitate interprofessional collaboration, and that make full use of the skills and expertise of the pharmacy workforce. Employers, governments, third-party payers, and other health care providers must work creatively with the pharmacy workforce to develop, test, and evaluate alternative ways of paying for the delivery of care and services.

10. UNDERTAKE further research to better understand pharmacy workforce satisfaction factors and their relationship to workforce recruitment and retention.

Both the public health care system and community pharmacy employers continue to report difficulties in recruiting pharmacists. This situation is particularly acute in hospitals, where recruitment challenges have resulted in reductions in pharmacy services.^{26,27} Rural and remote communities, which have traditionally been underserved by pharmacists and other essential health care providers, are experiencing similar problems. To develop strategies for recruiting and retaining an adequate pharmacy workforce in a competitive health worker marketplace, pharmacy employers must first understand the factors that affect health workers' satisfaction and thereby influence their workplace behaviour.

The *Moving Forward* research program has identified many of the important 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.²⁸ Canada's pharmacy students fully expect to be compensated in a manner reflecting the

amount of patient care and cognitive services provided. These expectations have important implications for the recruitment of the country's next generation of pharmacists.²⁹ Evidence also suggests that pharmacy technicians derive satisfaction from advanced tasks.³⁰ Additional research is needed to determine possible predictive links between elements of satisfaction and pharmacists' and pharmacy technicians' career decisions. This information will help the health care system in general, and pharmacy employers in particular, to create attractive practice environments for the pharmacy workforce. It will also allow pharmacists and pharmacy technicians to be positioned where they can contribute the most to patients' health outcomes. Although attracting and retaining pharmacy staff is one of the most pressing needs, the variables influencing satisfaction must also be assessed in terms of their impact on workforce performance, and the quality of care the workload provides.

11. INCORPORATE the expanded and innovative roles of the pharmacy workforce into recruitment and retention strategies.

As more collaborative models of health care delivery evolve, the need for pharmacists and pharmacy technicians with the specific skills and expertise for expanded or innovative practice will also increase. The challenge will then be to identify, attract and select the candidates with the requisite skills, all within a competitive pharmacy workforce market. Pharmacists have demonstrated the need, and expressed their willingness, to provide pharmaceutical care through expanded and innovative roles.³¹ Therefore, capitalizing on the novel opportunities offered by these new roles is a potential recruitment strategy. The IMPACT project, which successfully recruited appropriately skilled pharmacists for innovative primary care pharmacist positions within family health teams in Ontario, is an example of this

principle in action. By carefully tailoring a recruitment strategy highlighting the unique opportunities associated with a primary care role, the project was able to quickly attract a wide pool of candidates, and ultimately hire the qualified candidates they were seeking.³² The project also developed a series of tools that could serve as suitable models for other targeted recruitment strategies.

As the health system adopts more patient centred-roles for pharmacists, the recruitment and retention implications of these new practice models will need to be studied. New recruitment and retention strategies based on these findings can then be developed and tested.

12. IDENTIFY and ADDRESS the risk management needs of the pharmacy workforce practising in expanded and innovative roles.

The emergence of collaborative practice by multidisciplinary health care teams marks a new model in which the pharmacists and pharmacy technicians will play expanded and innovative roles. However, both these groups believe that such changes in the delivery of pharmacy services will increase their exposure to liability.³³ The appropriate management of liability in team-based care is not yet fully understood, as liability protection in Canada has typically been linked to individual health care providers.³⁴ The health care workforce, and its employers and

One of the most significant barriers to pharmacy practice change is the existing community model of reimbursement, which is predicated on the dispensing of prescriptions.

regulators, must develop a clear understanding of the responsibilities and accountabilities that will be shared among the various health care providers working in collaborative practice, and the limits of protection that will be available through liability insurance. In addition, the broader risk factors associated with expanded or innovative pharmacy practice must be identified and assessed so that appropriate risk strategies can be developed and implemented. These strategies must place patient safety and patient care as the highest priority, while ensuring that all members of the health care team fully carry out their professional responsibilities and maintain their professional accountability.

13. INCREASE the contribution of the pharmacy sector to pan-Canadian health human resources planning.

HHR planning continues to be an issue of critical importance to Canada. Governments and health care providers have devoted substantial time and resources to developing ways to ensure that the right skills are in the right place at the right time to meet the health care needs of Canadians. HHR planning has become more sophisticated in recent years, through a focus on understanding population health needs and matching health care services to those needs. These approaches have allowed HHR planning to encompass the entire continuum of care experienced by the patient.³⁵

To ensure that the health care provided by the pharmacy workforce is incorporated into HHR policy decisions and planning efforts, the pharmacy sector must gather and distribute evidence about the roles that its workforce is best suited to play. Pharmacy practice researchers and organizations must be supported and encouraged in their efforts to collect, share and use such data. Pharmacy advocates should engage with other health providers in evidence-based discussions of common issues and challenges. At the level of the health system as a whole, pharmacy leaders must be positioned

to educate policy-makers and support policy decisions.

THEME 3

Educating and Training the Pharmacy Workforce

The current minimum educational standard for pharmacy practice in Canada is a professional baccalaureate degree (Bachelor of Science) in pharmacy. The professional program itself is four years in length, but also has a minimum prerequisite of one additional year of undergraduate pre-pharmacy education. The Canadian Council for Accreditation of Pharmacy Programs (CCAPP) accredits all pharmacy undergraduate curricula, and thereby helps to ensure that the programs prepare new pharmacists to manage drug therapy in a patient-focused manner, as part of a health care team. At present, 10 Canadian schools of pharmacy offer this degree. Pharmacy graduates may undertake further education and training, such as masters or doctoral degrees in pharmacy, hospital- or institution-based residency training, or the Doctor of Pharmacy (PharmD) degree. Although not requirements for licensure, such additional education and training can be advantageous for those wishing to specialize in a particular area of research or clinical practice.

Another form of undergraduate training is the entry level PharmD (ELPD). The ELPD generally consists of two years of pre-pharmacy education and four years of pharmacy school, which allows a greater focus on clinical training in the latter part of the program than is the case for the current B.Sc. The Université de Montreal currently offers an ELPD degree. Pharmacy stakeholders are engaged in discussions to determine whether to modify the minimum education requirements for pharmacy practice, and if so, whether this should be accomplished by adjusting undergraduate curricula and/or by designating the ELPD as the minimum educational requirement.



The educational requirements for pharmacy technicians are less stringent. At present, pharmacy technicians are unregulated, which means there are no legislated educational requirements for practise. Pharmacy technicians report a wide variety of educational backgrounds, including high-school diplomas, 1- and 2-year pharmacy technician college programs, and university degrees in other disciplines.³⁶ However, the pharmacy sector is currently endeavoring to ensure that the role of pharmacy technicians supports the evolving role of pharmacists, and is developing national standards to govern the education and the practice of pharmacy technicians.

Despite the recent changes in the education and training of the pharmacy workforce, there is still a gap between the knowledge, skills and competencies possessed by the current cohort of recent graduates, and those that future graduates will need to meet the health care needs of Canadians.

14. REVIEW the knowledge base, abilities, values, interprofessional skills and clinical experience that will be required of pharmacists to practise in expanded and innovative roles, and **DEVELOP** university pharmacy curricula to ensure that future graduates will be competent to practise in these emerging roles.

The evolution of the pharmacist's role in the delivery of health care will require corresponding changes in pharmacists' skills and knowledge. To ensure that pharmacists can practise competently and safely in enhanced roles, pharmacy program curricula will have to change. Specifically, professional leaders and organizations have called for the education of pharmacy students to include: more interprofessional experiences; more training in communications, management, and leadership; more clinical practice in the hospital setting; additional skills in the documentation of care (especially using electronic health records); greater development of skills relating to prescribing and monitoring of outcomes; and more training in chronic diseases management through drug therapy.³⁷

The emergence of the ELPD degree is one example of universities responding to recognized needs at the entry-to-practice level (in this case, increased experiential learning in a clinical setting). Universities should continue modifying their curricula over time to ensure that students develop the skills and knowledge they will need to practise at the level required by the health system. Such curricular change must reflect ongoing evolution in the delivery of health care and in entry-level practice requirements.

15. ENSURE that pharmacy graduates of Canadian universities receive a credential that appropriately reflects the expected greater academic rigour of restructured curricula for the first professional degree in pharmacy.

To more closely align the care that pharmacists provide with the needs of the Canadian health system, the profession has committed pharmacists to an enhanced role with a greater focus on the patient. As noted elsewhere in this document, changes to the professional degree programs in pharmacy will be required to ensure that pharmacists practise competently and safely in these expanded roles, and the minimum education requirements for pharmacy may also

change. However, there may be a limit to how much the existing professional program can expand to accommodate additional skills and training development. Many pharmacy schools in Canada are therefore developing strategic plans that will likely result in major changes to the professional degree, including more substantive admission requirements and enhancements to the professional program itself. According to the policies of some universities, such an expanded professional program for pharmacy would qualify for the entry-level Doctor of Pharmacy (ELPD) degree.

16. SUPPORT and ENHANCE interprofessional collaboration in pharmacy education and practice.

A basic tenet of health care renewal in Canada is that health care delivery and patient health outcomes can be improved through the increased use of multidisciplinary teams of health professionals. Governments and sectoral groups have been working toward a future of expanded interprofessional education and postgraduate collaborative practice involving many different health care professionals. These efforts are now bearing fruit as universities are beginning to offer interprofessional health sciences programs. In addition, accreditation requirements for pharmacy programs now stipulate that programs must offer their students opportunities to learn with the students of other health care disciplines, and to undertake experiential clinical rotations in multidisciplinary teams.

Creative strategies are needed not only to increase the number and variety of high quality experiential training opportunities, but also to clearly demonstrate the value of these opportunities to the organizations that offer them.

However, more is needed to facilitate interprofessional interaction, particularly at the practice level. The emergence of provincially supported primary health care teams in Ontario and Alberta reflects a successful approach, but many pharmacists at the grassroots level feel unsupported when it comes to initiating collaboration. Opportunities must be created for these practitioners to work collaboratively with other health care providers, in teams that recognize and optimize the role that each health expert can play in achieving optimal patient health outcomes.

17. INCREASE the number and variety of quality experiential training opportunities necessary to prepare pharmacists, pharmacy technicians and students to practise in expanded and innovative roles.

Fundamental to all of the *Moving Forward* recommendations is the concept that pharmacy practice will change, as pharmacists and pharmacy technicians begin to occupy expanded and innovative roles in the delivery of health care. As these changes occur, universities, colleges and other training facilities must review and modify their pharmacy curricula to ensure that graduating pharmacists and pharmacy technicians are ready to practise at the level required by the health system and by individual Canadians.

The education and training of both pharmacists and pharmacy technicians to practise in expanded and innovative roles will require practical experiential exposure to these new roles, under the supervision of a pharmacist with experience in the particular area. Academic institutions rely heavily upon practitioners to provide the sites (and the preceptors) for this kind of learning. Changing roles for pharmacists and pharmacy technicians will place increased pressure on workplaces and practitioners to host and support experiential training sites. Creative strategies are needed not only to increase the number and variety of high-quality experiential training opportunities, but also to clearly

demonstrate the value of these opportunities to the organizations that offer them. The return on investment for such support must be clearly articulated to employers, governments, health authorities and other health care providers.

18. DEVELOP funding mechanisms to support experiential training opportunities necessary to prepare pharmacists, pharmacy technicians and students to practise in expanded and innovative roles.

External funding support will be needed to increase the number and variety of high-quality experiential training opportunities. Provincial governments, employers and health authorities all have roles to play in providing this financial support. These stakeholders must also recognize the need for new approaches to funding and delivering experiential learning opportunities for both students and current practitioners. Provincial ministries of health and education, where policy decisions for health care delivery and for the funding of training seats often intersect, are also encouraged to consider strategies for funding these much-needed experiential learning opportunities at the undergraduate level in ways similar to those used for other health care professions.

19. DEVELOP and SUPPORT bridging programs for practising pharmacists, pharmacy technicians and pharmacy assistants to upgrade their skills as necessary to practise in expanded and innovative roles.

In addition to the changes in undergraduate education and training that will be necessary to produce a pharmacy workforce which is ready to practise in expanded and innovative roles at the entry level, the training needs of the current pharmacy workforce cannot be overlooked. Additional forms of education or training will be required to enable the current

workforce to meet standards of practice as they are upgraded to align with the changing health care needs of Canadians. Pharmacy bridging programs will allow current members of the workforce to leverage their experience and skills while transitioning to a new level of practice. An important component of bridging education will be experiential learning.

Pharmacists strongly believe that in the near future they both should and will be practising in new ways that are better aligned with health system requirements, and they know that they will require additional training or education to do so. Yet, most pharmacists also believe that the training opportunities they need do not exist.³⁸

The need for bridging education for pharmacy technicians is equally acute. Prior to 2007, no entry-to-practice education standards existed for pharmacy technicians, and the knowledge, skills and abilities they gained through educational programs have varied greatly. Canada's first accreditation standards for pharmacy technician training programs were released in 2008, but the sector has yet to see pan-Canadian implementation of these standards.³⁹ As provinces put in place the elements allowing the registration and eventual licensing of pharmacy technicians, current pharmacy technicians may require bridging education (including an assessment of prior learning) to ensure that their competencies match their profession's specific provincial regulatory requirements.

20. SUPPORT continuing education and professional development requirements that reflect the new skills and knowledge that pharmacists and pharmacy technicians require to practise in expanded and innovative roles.

Practicing pharmacists need continuing education (CE) and continuing professional development (CPD) to maintain an up-to-date knowledge base in a subject area that

is rapidly changing. A variety of CPD and CE programs, offered through national and provincial professional associations, faculties of pharmacy, pharmacy chains, and pharmaceutical companies, are available to pharmacists across the country. Pharmacists are expected to continuously improve their professional competence through learning opportunities, and demonstrating that such learning has been undertaken is a requirement for license renewal in every province. As such, the CPD or CE requirements for pharmacists are under the purview of the provincial/territorial pharmacy licensing authorities, and vary across the jurisdiction.

As pharmacy undergraduate training institutions adjust their curricula to better fit the requirements of pharmacists and pharmacy technicians practising in innovative and expanded roles, new CPD or CE programs must be created, reflecting the changing needs of the health system. The workforce of the future must develop and maintain skills and knowledge relating to the use of novel technologies, participation on multidisciplinary teams, and the performance of advanced medication management tasks. Equally important, the alignment of CE and CPD requirements for pharmacists and pharmacy technicians should be reviewed to ensure that the right opportunities become available, but also that the workforce is encouraged to participate in these activities.

21. ENCOURAGE pharmacy educational programs to develop strategies to meet future demands for academic staff.

The education and training of the next generation of pharmacists may be jeopardized by shortages of individuals with advanced degrees and the necessary educational background in pharmacy to serve in academic positions. Very few of today's pharmacy students plan to pursue an advanced degree in pharmacy or a research career in the academic setting.⁴⁰ In

addition, significant numbers of the current cohort of pharmacy faculty are expected to retire from academic institutions by 2010. Although most faculties of pharmacy have some internal succession plans in place, many have noted that pharmacists and students alike no longer appear to be attracted to academic appointments.⁴¹ It is unknown whether this issue is also at play for pharmacy technician educators; however, given the new expectations that will be placed on pharmacy technician education programs in the coming years, it is likely that these schools will also need to develop new recruitment strategies to attract their academic staff. All pharmacy educational institutions are therefore encouraged to consider creative strategies for ensuring that academic positions provide competitive value to potential educators and offer a fulfilling professional environment.

22. ESTABLISH standards and accreditation processes for education and training pathways for specialization in pharmacy practice.

As pharmacy practice evolves to better meet the health care needs of Canadians, there is evidence of an emerging model of "specialist" practice, in which pharmacists with extensive clinical experience (or specific training in a particular health condition) focus their care on certain health conditions or patient groups. In particular, specialization is growing in the management of chronic diseases, such as diabetes, congestive heart failure and AIDS.⁴² Some pharmacists have obtained certification for their specialization by authorities outside the pharmacy sector, such as the Canadian Diabetes Association. Others have had their specialized expertise certified through an examination process administered by the Board of Pharmaceutical Specialties in the United States.

These specialist pharmacists require a greater level of expertise and autonomy related to their specialties than what is outlined in Canada's

current entry-to-practice requirement. As pharmacists explore education and training pathways to specialization, standards of practice, and methods of ensuring that pharmacists meet those standards, will be needed.

23. ENCOURAGE and SUPPORT educational institutions offering pharmacy technician training programs to meet national accreditation standards.

In the future, the safety, security and integrity of the drug distribution system will be protected in part through an enhanced role of regulated pharmacy technicians. In addition to a consistent approach to the provincial licensure and regulation of pharmacy technicians (discussed in further detail in the next section of this document), consistency is needed in their education to ensure a supply of appropriately trained pharmacy technicians who meet the required regulatory criteria.

The development of nationally approved educational outcomes for pharmacy technician education programs and national entry-to-practice competencies allowed the establishment of national accreditation standards for pharmacy technician training programs in 2008.^{43,44} There is a wide variety in the length and curricula of the pharmacy technician training programs currently available, and it is anticipated that many of these training programs are not yet in a position to meet these standards. More needs to be done to both communicate the requirement to existing schools, and to support these schools as they put in place the necessary procedures, policies, agreements and curricular adjustments to meet the new standards. Those provinces with schools that are likely already well positioned to meet the standards have valuable lessons and tools to share in this process. Information sharing and knowledge translation will therefore be key.



THEME 4

Regulating the Pharmacy Workforce

Each Canadian province or territory has a designated pharmacy regulatory authority with a mandate to protect the public by assuring the competency, establishing the authority, and upholding the accountability of its registered and/or licensed pharmacists. Some regulatory authorities are also responsible for registering or licensing the pharmacies in their jurisdiction. The practice of pharmacy is governed by both Federal and Provincial Acts and their regulations. It is the responsibility of the regulatory authorities to ensure that the pharmacists and pharmacies under their authority are abiding by the appropriate legislation and standards of practice.

Pharmacy technicians do not belong to a regulated health profession, as yet. There is ongoing discussion among pharmacy stakeholders as to whether Canadians would be best served if pharmacy technicians were regulated by the existing pharmacy regulatory authorities, or by some other body.

24. IDENTIFY and ADDRESS the current regulatory opportunities and challenges in enabling the health system to incorporate expanded and innovative roles for pharmacists and pharmacy technicians in the delivery of health care.

A commonly heard theme throughout the *Moving Forward* initiative was the perception that the current regulatory environment is a critical barrier preventing the evolution in pharmacy practice to a point which allows pharmacists to take on expanded and innovative roles in the management of medication therapy. The legislation governing pharmacy practice differs across the country in the methods and language it uses to set out the tasks of acts that a pharmacist may (or may not) do. In some cases, the legislation has not kept pace with advances in research, technology, training, and public expectations. For example, as noted by the Ontario College of Pharmacists in its June 2008 submission to the Health Professions Regulatory Advisory Council regarding the scope of practice of pharmacy, “controlled acts not previously authorized to pharmacists are now incorporated into the day-to-day practice of pharmacists in both hospital and community settings.... Pharmacists have the education and training to do these things.”⁴⁵. In this instance, without clear legislative authority, many pharmacists are reluctant to carry out certain acts to the extent that their professional competence, and expected standards of practice, would permit.

Pharmacists and pharmacy technicians are reconciling this conflict by creatively delivering enhanced pharmacy services in new ways that are within legal scope of practice, but that allow pharmacists to focus on patient care. The assessment of these innovations may present an opportunity to adjust formal standards of care and practice. Because pharmacy regulatory authorities are responsible for ensuring public safety by, among other things, enforcing standards, governments should also consider incorporating updated standards of care and

practice into the legislative instruments that regulate pharmacy practice.

However, regardless of the regulatory model in use, pharmacists in all provinces and territories face impediments to practising to the fullness of their scope, suggesting that barriers are likely not exclusively regulatory. The current regulatory structure governing pharmacy practice presents both challenges and opportunities for the pharmacy workforce in its efforts to improve patient health outcomes. A thorough understanding of national and provincial/territorial regulatory requirements is needed to accurately identify existing opportunities for optimal use of the pharmacy workforce, and the barriers that might prevent such optimization.

25. ACHIEVE national consensus on the principles of a common regulatory framework for pharmacy technicians.

Making effective use of the knowledge and skills of Canada’s current pharmacy workforce is essential to ensuring that Canadians receive the pharmacy services they need to achieve better health outcomes. As the health system begins to integrate pharmacists into expanded and innovative models of pharmacy practice to deliver these services, a parallel evolution will occur in the role of pharmacy technicians. In particular, as pharmacists increasingly focus on direct patient care and correspondingly decrease the amount of time they spend on the technical aspects of dispensing medications, pharmacy technicians will be asked to assume responsibility for certain drug distribution tasks that were previously within the pharmacist’s scope of practice. For this to happen, however, pharmacists, the health system, and the public at large must be assured of the quality of the work of these technicians.

The beginnings of such a framework are already in place in some of Canada’s provinces, as regulatory authorities and stakeholders have

jointly created the regulatory, educational, systemic, and practice elements required to achieve regulated status for pharmacy technicians. The development of legislation and regulations governing the actions of health care professionals is a provincial responsibility, as is the implementation of the regulatory process. However, a consensus on the key principles required for implementing a regulatory process for pharmacy technicians is needed at the national level. In fact, national consensus has already been achieved in the key areas of entry-to-practice competencies and accreditation standards for pharmacy technician education programs, but more remains to be done in other areas.

Some provinces have already made significant progress in implementing the elements needed for the regulation of pharmacy technicians within their respective jurisdictions. Working toward national consensus on common regulatory principles should not detract from the progress that these stakeholders have already achieved, nor limit their future progress. Rather, the common concerns that have been raised, and the workable approaches that have been developed, should be shared on a pan-Canadian basis. Even so, identifying and implementing the most feasible regulatory model in each province or territory will ultimately depend on jurisdictional needs and decisions.

26. DETERMINE the scope of practice of regulated pharmacy technicians.

As pharmacy stakeholders work to create, define, and agree on the pan-Canadian principles of a common regulatory framework for pharmacy technicians, the need for a harmonized understanding of the “scope of practice” of regulated pharmacy technicians will become acute. The term “scope of practice” is itself subject to numerous interpretations, but can generally be thought of as referring to the “boundaries of practice” of a health care

professional, and the accepted range of activities that a professional is able and authorized to perform.⁴⁶

The legal boundaries of a profession’s scope of practice are governed by provincial/territorial legislation, and are therefore subject to legislative differences across Canada. However, the development of a pan-Canadian definition of the scope of practice of a regulated pharmacy technician would allow the functions of pharmacy technicians to be standardized. If the pharmacy workforce is to work optimally in delivering high quality patient care, then employers must have a clear understanding of the different and interrelated roles that their employees will play. The potential confusion, workplace tension, and ineffective workload distribution that can occur because of overlap in scopes of practice can be minimized through clear understanding and effective management. In particular, given that regulated pharmacy technicians will be authorized to carry out certain drug distribution tasks that are currently within the legal domain of the pharmacist, some overlap between pharmacists’ and pharmacy technicians’ scopes of practice is to be expected.

Defining a common scope of practice for regulated pharmacy technicians will require input collaboration among the regulatory authorities, educators, ministries of health and education, professional associations, and other stakeholders. In return, a consistent scope of practice will facilitate a common public and professional understanding of the role of pharmacy technicians.

27. ADOPT a standardized entry-to-practice exam as evidence of a regulated pharmacy technician’s competency to practise.

Another required element for the eventual pan-Canadian regulation of pharmacy technicians is an assessment and certification process to ensure that pharmacy technicians have undertaken

the appropriate education and possess the required entry-to-practice competencies. For pharmacists, this step is achieved through a national examination process administered by the Pharmacy Examining Board of Canada (PEBC). The provincial/territorial pharmacy regulatory authorities in all provinces, except Quebec, require pharmacist candidates seeking to become registered or licensed to practise to obtain a certificate of qualification from the PEBC.

A similar process for pharmacy technicians is recommended, and many of the necessary elements are already in place. In particular, the PEBC is piloting a national entry-to-practice examination for pharmacy technicians, which is based in part on nationally approved pharmacy technician entry-to-practice competencies. As more provinces put in place the processes that will enable the registration and eventual regulation of pharmacy technicians, acceptance by the appropriate regulatory authority bodies of a national entry-to-practice exam is critical to ensuring comparable competency across Canada.

28. FACILITATE pharmacy workforce mobility within Canada.

As the country grapples with shortages in pharmacy and many other health care professions, efforts to facilitate the mobility of pharmacists and pharmacy technicians both within and between provinces can be a powerful tool in distributing the workforce appropriately. Currently, the movement of pharmacists around the country occurs under the umbrella of the National Association of Pharmacy Regulatory Authority's (NAPRA's) Mutual Recognition Agreement (MRA). The provincial/territorial regulatory authorities who are party to this agreement have committed to ensuring that a "pharmacist licensed/registered in one Canadian jurisdiction will have his/her qualifications recognized in another Canadian jurisdiction".⁴⁷ This agreement complies with the labour mobility requirements set out by the federal/

provincial/territorial Agreement on Internal Trade (AIT).

As pharmacy practice has evolved, pharmacy regulatory authorities and other stakeholders have identified certain issues within the current agreement for which adequate harmonization (in terms of standards of practice and specific licensing requirements) has not been achieved. For example, the recognition of emerging specialized or advanced pharmacy credentials poses a new challenge for harmonization of licensing requirements. An appropriate mechanism for ensuring the mobility of pharmacy technicians is another issue to be resolved. NAPRA is currently reviewing the MRA with a view to addressing some of these issues, and has committed to full compliance with the AIT in the near future.⁴⁸

Ensuring the portability of credentials throughout Canada will enhance the optimal deployment of the pharmacy workforce. Care must be taken however, to ensure that increased mobility does not have the unintended effect of placing additional stresses on regions already facing difficulties in attracting or maintaining their pharmacy workforce.

A thorough understanding of national and provincial/territorial regulatory requirements is needed to accurately identify existing opportunities for optimal use of the pharmacy workforce...

THEME 5

Improving the Integration of International Pharmacy Graduates into the Pharmacy Workforce

An integral part of Canada's HHR strategy is reducing barriers to practise for health professionals who have been educated outside of Canada. Internationally educated health professionals form a critical part of Canada's health care workforce, and the development of a pan-Canadian approach to their integration is a key theme in HHR planning. The *Moving Forward* partners believe that internationally educated health professionals who have chosen to come to Canada should be supported in their efforts to practise their profession in this country. 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, 27% of all practising pharmacists are IPGs, and some reports suggest that the proportion of IPGs among newly licensed pharmacists is even higher.^{49,50} It is essential that these individuals have the knowledge and skills required to practise safely and effectively, but, for many IPGs, there can be a large gap between their pharmacy experience and training and the expected standards of practice in Canada. IPGs can also face difficulties in interacting with patients and other health care providers in settings where professional and cultural norms may be different from their own. The current evolution of the pharmacist's role in Canada also adds another layer of complexity to what may already be a confusing new role.

Improving the integration of IPGs into the pharmacy workforce encompasses not only ensuring they are prepared for the formal

processes they must undergo for licensure (or registration) to practise, but also supporting their continued professional practice after licensure.

29. ESTABLISH and MAINTAIN a plain-language website with comprehensive information about licensure and integration into pharmacy practice.

All pharmacists (both those educated in Canada and IPGs) must be granted a license (or registration) by the provincial/territorial pharmacy regulatory authority in the jurisdiction in which they wish to practise. The requirements for Canadian-trained pharmacists typically include the completion of a national certification examination (administered by the PEBC), structured practical training, and a provincial jurisprudence exam; in addition to the demonstration of a certain level of language proficiency. While the exact nature of these requirements varies to some degree across the provinces/territories, there are significant differences in the additional steps that IPGs are specifically required to complete. For example, the Ontario College of Pharmacists requires IPGs to complete a minimum of 32 weeks of pharmacy bridging education and structured practical training as a licensure requirement, while the Ordre des pharmaciens du Quebec requires all non-Quebec educated candidates to complete courses at one of the province's two schools of pharmacy.

There is no comprehensive, "one-stop" tool offering information to IPGs about charting the path to licensure within their province/territory of choice, listing opportunities for a career in pharmacy throughout the country, and comparing pharmacy practice in various countries of origin with pharmacy practice in particular regions of Canada. Instead, IPGs who are interested in moving to Canada must seek information from government agencies at the federal, provincial and territorial levels, as well

as from professional and regulatory bodies. As such, there is no guarantee that the information available to IPGs is up to date, nor are IPGs allowed the opportunity to consider and compare the full range of opportunities within the practice of pharmacy.

A comprehensive, up-to-date website will ensure that the most relevant information about pharmacy licensure and practice in Canada is available to IPGs before their arrival in Canada. This will help IPGs to make informed career and immigration decisions and should help to eliminate the confusion, unrealistic expectations, delays, and frustrations that many IPGs now working in Canada have reported.

30. INCREASE the availability of, and IMPROVE access to, pharmacy bridging programs and training for international pharmacy graduates.

A pharmacy bridging program for IPGs is a “program designed to bridge the gap between an individual’s education or experience and the standards of practice in Canada”.⁵¹ The *Moving Forward* initiative has documented nine programs available in Canada that are designed to provide bridging education to IPGs. Many IPGs are unaware of these programs, or they do not perceive any value in participating in them. However, IPGs who have completed bridging programs report greater success on the national

There is no comprehensive, “one-stop” tool offering information to IPGs about charting the path to licensure within their province/territory of choice...

pharmacist certification exams (administered by the PEBC), and better understanding of Canadian pharmacy practice, including patient-focused pharmaceutical care, therapeutics, and communication skills and techniques.⁵² These advantages translate into more rapid achievement of licensure and higher demand from employers for graduates of bridging programs, over those IPGs who have not participated in such programs.

Stakeholders report that IPGs entering practice after completing a bridging program are more competent and confident than IPGs who have not done so, and that they are better prepared for safe and effective patient care and continuous learning.⁵³ The programs have also proven helpful in developing social and professional networks, which in turn help IPGs to develop important communication skills and gain experience that is lacking among many internationally and even domestically trained pharmacists. Increasing the availability of, and access to, pharmacy bridging programs and other training can be facilitated by providing innovative methods of program delivery, offering such programs in more locations, and ensuring sustainable government investment in developing, supporting, and expanding bridging programs.

31. IDENTIFY, and PROMOTE the adoption of, common standards for teaching and assessment within pharmacy bridging programs for international pharmacy graduates.

There are currently no pan-Canadian standards to assure consistent quality of pharmacy bridging education designed for IPGs. A formal system of standards and accreditation, similar to that used for other pharmacy educational programs, should be developed to assure students, employers, regulators, and other stakeholders that the quality of teaching and assessment within pharmacy bridging programs

is consistent. This quality assurance would make a fundamental contribution to the profession's commitment to safe and effective patient care and improved patient health outcomes.

Not only would the adoption of such standards for pharmacy bridging programs reassure IPGs that employers and patients will recognize the education process as valid, but it also guarantees employers that the IPGs they hire have had sufficient opportunity to engage in appropriate, relevant, and up-to-date learning that has been recognized by a national accreditation body.

32. DEVELOP pan-Canadian standards and model training programs to support preceptors and mentors of international pharmacy graduates.

Preceptors and mentors are experienced, licensed pharmacists who provide guidance, advice, or training to both domestically and internationally educated pharmacist candidates as they attempt to obtain their license to practise. Mentors typically provide support or “coaching” to individuals as they begin practising in their profession, whereas preceptors supervise and evaluate pharmacist candidates during the structured practical training they must complete to obtain their provincial license to practise. The level of support for pharmacy preceptors and mentors varies, with some, but not all, Canadian provinces requiring preceptors of domestic pharmacy trainees to undergo formal training programs. However, little formal training or support is available to those who work with IPGs in these capacities. Examples of learning needs that have been identified by preceptors of IPGs include cross-cultural and diversity training, training in methods of teaching and assessing clinical and communication skills, training in conflict resolution, and training in teaching methods for different learning styles.⁵⁴ Training of IPG preceptors is critical to ensuring that the preceptorship experience is similar for all IPGs and that the education and training that IPGs

receive from their preceptors is standardized, so as to promote equivalency in IPG competency.

33. DEVELOP a diagnostic tool and support system to assist international pharmacy graduates in assessing and customizing their learning needs.

A diagnostic tool and support system will assist IPGs in assessing their learning needs and customizing an appropriate learning approach. This assessment and customization will give them more realistic expectations regarding their competency to practise. For example, the performance of IPGs on the Qualifying Examination (the PEBC's national certification exam) is markedly lower than that of Canadian graduates, and many IPGs must take the examination more than once before passing it successfully.⁵⁵ A diagnostic tool that allows IPGs to assess what additional learning or training they might require before undertaking the national certification exams, could enhance their chances of success.

It is important to recognize that IPGs are a very heterogeneous group; as such, no “one-size-fits-all” curriculum or training program will meet the needs of every IPG. A diagnostic tool and support system would allow individuals to identify their own learning needs, customize a learning plan based on available educational resources, and thus more efficiently meet regulatory and practice requirements.

34. PROMOTE the availability of an interprofessional orientation program on the Canadian health care system, suitable for international pharmacy graduates and other health professionals.

Employers and other pharmacy stakeholders are concerned that some IPGs may begin practising in Canada without a thorough understanding of

how the Canadian health care system functions or the role that pharmacists play within the system. This concern has also been raised regarding internationally trained professionals in other health disciplines.^{56,57}

Recognizing this, Health Canada has funded *Orientation to Canadian Health Care Systems, Culture and Context*, an interprofessional orientation program that highlights the division of federal and provincial responsibilities in health care, the culture of interprofessional collaboration, and the importance of high-quality patient care.⁵⁸ This and other similar programs should be promoted to IPGs and other stakeholders as a fundamental aspect of training for practising pharmacy within the Canadian health care system.

Long-term funding for the delivery of such programs must be implemented and sustained. Such funding will increase IPGs' awareness of the aspects of Canadian health care delivery that are critical to ensuring high-quality patient outcomes.

35. DEVELOP pan-Canadian standards for the level of communicative competency required for safe and effective pharmacy practice.

Pharmacy is a communication-intensive profession that entails interaction with patients, physicians, and other health care providers. Communication skills therefore constitute a critical aspect of pharmacy practice. All pharmacists, whether trained domestically or internationally, must be alert to their skills in this area and must work conscientiously to hone those skills.

Competency standards for Canadian health care professionals typically include the ability to understand and communicate, both verbally and in writing, in English or French (or both), as well as a comprehensive understanding of

health-related terminology and vocabulary. Yet the nuances of effective communication with other members of the health care team (pharmacist colleagues, pharmacy technicians, and other health care providers) should not be overlooked. Despite the fact that the majority of IPGs easily meet the minimum language fluency requirements as determined by the provincial/territorial pharmacy regulatory authorities (which generally use scores on standardized language tests as a measure of proficiency), employers and stakeholders continue to highlight communication difficulties as the major barrier hindering IPGs' performance in practice.⁵⁹ Standards describing the profession-specific communicative competencies that are required in the delivery of pharmacy services would provide a mechanism for assessing whether or not an IPG possesses an appropriate level of language skill and communications ability to practise safely and effectively.

36. INCREASE the availability of, and IMPROVE access to, pharmacy-specific communications skills programs.

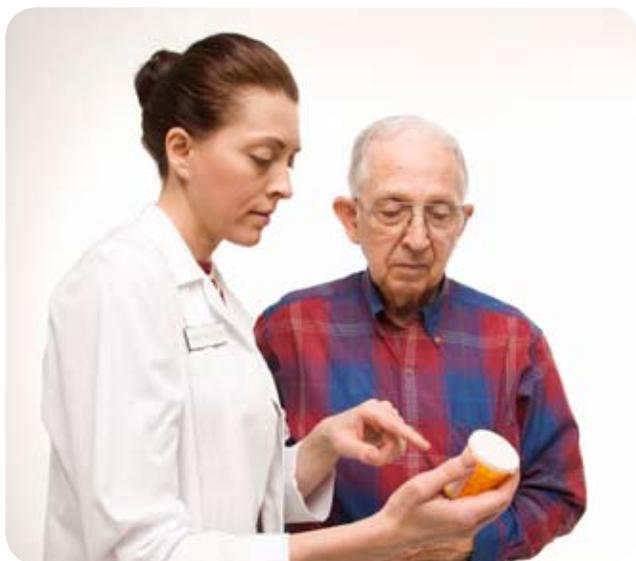
A formally structured, pharmacy-specific curriculum that allows teaching and assessment of communications skills is essential to ensuring that IPGs have the confidence and competence necessary for safe and effective pharmacy practice. The University of Toronto recently launched an Enhanced Language Training (ELT) program aimed at IPGs, to improve their English language skills in preparation for completing the University's IPG Bridging Program.⁶⁰ This curriculum has been validated by the University of Toronto and could, with appropriate funding and personnel, be delivered anywhere in Canada. As communicative competency standards become available, additional programs can be developed and evaluated.

CONCLUSION

The *Moving Forward* initiative sought to provide a foundation of evidence that would be sufficient to support a series of specific recommendations designed to help ensure that Canadians have access to the pharmacy services they require through the development and maintenance of a strong pharmacy workforce. The evidence provided, and the recommendations themselves, are not intended to be a panacea for preventing future pharmacy human resources shortages, or potential mismatches between population needs and pharmacy services. Instead, they serve to illuminate some of the most pressing situations that stakeholders have indicated are preventing them from meeting their patients' needs, and that stem primarily from human resources issues.

There continues to be a dearth of research on pharmacy human resources. More data describing new practice models, workflow patterns, labour market trends, and the impacts of pharmacy practice changes (on both patient health outcomes and human resources requirements) are still needed.

Stakeholder action on any of *Moving Forward's* 36 recommendations would lead to measurable



Stakeholder action on any of *Moving Forward's* 36 recommendations would lead to measurable success in Canada's ability to position its pharmacy workforce so that it delivers the right care in the right place at the right time.

success in Canada's ability to position its pharmacy workforce so that it delivers the best health care for Canadians. *Moving Forward* partners recognize that the implementation of the recommendations arising from this initiative is dependent on the engagement of the sector stakeholders. They also acknowledge that there is already progress in many areas that aligns with the final *Moving Forward* recommendations. Over the next year, the *Moving Forward* partners have committed to monitoring and encouraging this progress, and disseminating information among all pharmacy workforce planning stakeholders.

Canada's pharmacy human resources 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. Only when the full expertise and ensuing responsibilities of pharmacists and pharmacy technicians are properly understood and incorporated into the health system will Canada be in a position to more accurately plan for the supply, education and training, deployment, recruitment, performance and retention of its pharmacy workforce.

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APPENDIX I: LIST OF MOVING FORWARD RECOMMENDATIONS

Communicating the Value that the Pharmacy Workforce Contributes to Canadian Health Care

1. Establish a vision for pharmacy based on patient and health system needs.
2. Increase public and stakeholder awareness of, and support for, the vision for pharmacy.
3. Demonstrate, through evidence-based research, the impacts of pharmacy practice on patient outcomes and on the effectiveness of the health system.
4. Communicate how the pharmacy profession can address the health care needs of the population.

Managing the Pharmacy Workforce

5. Identify and monitor, on an ongoing basis, pharmacy workforce supply and demand indicators.
6. Support the adoption of technologies that enhance the efficiency and safety of drug distribution.
7. Support the adoption and implementation of e-health technologies that enhance the ability of pharmacists to provide outcomes-focused, interdisciplinary care.
8. Secure funding for the adoption and implementation of e-health technologies.
9. Evaluate new and flexible funding models for patient care services that will be delivered by the pharmacy workforce of the future.
10. Undertake further research to better understand pharmacy workforce satisfaction factors and their relationship to workforce recruitment and retention.
11. Incorporate the expanded and innovative roles of the pharmacy workforce into recruitment and retention strategies.
12. Identify and address the risk management

needs of the pharmacy workforce practising in expanded and innovative roles.

13. Increase the contribution of the pharmacy sector to pan-Canadian health human resources planning.

Educating and Training the Pharmacy Workforce

14. Review the knowledge base, abilities, values, interprofessional skills and clinical experience that will be required of pharmacists to practise in expanded and innovative roles, and develop university pharmacy curricula to ensure that future graduates will be competent to practise in these emerging roles.
15. Ensure that pharmacy graduates of Canadian universities receive a credential that appropriately reflects the expected greater academic rigour of restructured curricula for the first professional degree in pharmacy.
16. Support and enhance interprofessional collaboration in pharmacy education and practice.
17. Increase the number and variety of quality experiential training opportunities necessary to prepare pharmacists, pharmacy technicians and students to practise in expanded and innovative roles.
18. Develop funding mechanisms to support experiential training opportunities necessary to prepare pharmacists, pharmacy technicians and students to practise in expanded and innovative roles.
19. Develop and support bridging programs for practising pharmacists, pharmacy technicians and pharmacy assistants to upgrade their skills as necessary to practise in expanded and innovative roles.
20. Support continuing education and professional development requirements that reflect the new skills and knowledge

that pharmacists and pharmacy technicians require to practise in expanded and innovative roles.

21. Encourage pharmacy educational programs to develop strategies to meet future demands for academic staff.
22. Establish standards and accreditation processes for education and training pathways for specialization in pharmacy practice.
23. Encourage and support educational institutions offering pharmacy technician training programs to meet national accreditation standards.

Regulating the Pharmacy Workforce

24. Identify and address the current regulatory opportunities and challenges in enabling the health system to incorporate expanded and innovative roles for pharmacists and pharmacy technicians in the delivery of health care.
25. Achieve national consensus on the principles of a common regulatory framework for pharmacy technicians.
26. Determine the scope of practice of regulated pharmacy technicians.
27. Adopt a standardized entry-to-practice exam as evidence of a regulated pharmacy technician's competency to practise.
28. Facilitate pharmacy workforce mobility within Canada.

Improving the Integration of International Pharmacy Graduates into the Pharmacy Workforce

29. Establish and maintain a plain-language website with comprehensive information about licensure and integration into pharmacy practice.

30. Increase the availability of, and improve access to, pharmacy bridging programs and training for international pharmacy graduates.
31. Identify, and promote the adoption of, common standards for teaching and assessment within pharmacy bridging programs for international pharmacy graduates.
32. Develop pan-Canadian standards and model training programs to support preceptors and mentors of international pharmacy graduates.
33. Develop a diagnostic tool and support system to assist international pharmacy graduates in assessing and customizing their learning needs.
34. Promote the availability of an interprofessional orientation program on the Canadian health care system, suitable for international pharmacy graduates and other health professionals.
35. Develop pan-Canadian standards for the level of communicative competency required for safe and effective pharmacy practice.
36. Increase the availability of, and improve access to, pharmacy specific communications skills programs.

APPENDIX II: LIST OF MOVING FORWARD CONTRIBUTORS

The members of the *Moving Forward* Management Committee express their appreciation to the following individuals and organizations, whose participation in this initiative has contributed to its success:

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The Management Committee also wishes to thank all the subject matter experts who contributed to one or more specific research working groups.

Invaluable communications and research assistance was provided by national and provincial pharmacy organizations, associations and regulatory authorities.

Finally, the Committee also extends its appreciation to the more than 7500 individuals across Canada who kindly took the time to participate in surveys, focus groups, interviews, and other facilitated consultations.

APPENDIX III: LIST OF *MOVING FORWARD* RESEARCH REPORTS

The following individual research reports and other documents were developed as part of the *Moving Forward* body of work, and can be accessed at www.pharmacyhr.ca

Pharmacy Technicians:

- An Environmental Scan of Pharmacy Technicians (November 2006)
- The Pharmacy Technician Workforce in Canada: Roles, Demographics and Attitudes (March 2007)
- National Dialogue on Pharmacy Technicians: Summary of Outcomes (January 2008)

International Pharmacy Graduates:

- Integration of International Pharmacy Graduates into Canadian Pharmacy Practice: Barriers and Facilitators (March 2008)
- Pharmacy Bridging Programs in Canada: Fact Sheets (Revised August 2008)

The Pharmacy Workforce:

- Pharmacy Human Resources Challenges and Priorities: Perspectives of Pharmacy Students* (May 2008)
- Pharmacy Human Resources Challenges and Priorities: Research Report (August 2008)
- Innovative Pharmacy Practices in Canada: Volume I (August 2008)
- Innovative Pharmacy Practices in Canada: Volume II (August 2008)
- Research Synthesis Report (May 2008)

* Supplementary report developed and released in partnership with the Canadian Association of Pharmacy Students and Interns



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