

Pharmacy Human Resources in Canada

A Study of Pharmacists and Pharmacy Technicians

PROJECT SUMMARY

Managed by the Canadian Pharmacists Association (CPhA), on behalf of the Pharmacy Sector

Funded by the Foreign Credential Recognition Program (FCR), Human Resources and Skills Development Canada (HRSDC)

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Executive Summary

The Pharmacy Human Resources Study (PHRS) will entail a comprehensive and coordinated body of work that will gather essential information required for the development of a pan-Canadian human resources strategy for the pharmacy workforce. A significant component will be focused on internationally-trained pharmacy graduates (IPGs) reflecting their increasing importance in the pharmacy workforce. The Study has four primary aims:

- To develop a comprehensive understanding of the pharmacy workforce in Canada, and the factors that influence its structure and the skills and competencies of its members.
- To identify short- and long-term human resource challenges facing the pharmacy sector that might need to be addressed in a pan-Canadian pharmacy HR plan.
- To identify challenges facing the pharmacy sector that might be specific to individual Canadian provinces and territories.
- To offer recommendations that will help ensure a pharmacy workforce fit for purpose for the future needs of Canadians and the Canadian health care system.

This study aims to meet the needs expressed by pharmacy stakeholders across Canada for improved HR planning for the pharmacy workforce. It will gather a significant body of new knowledge, and build a common understanding among relevant stakeholders about the pharmacy workforce and the challenges it faces. It will also provide recommendations of relevance to the profession, educational institutions, licensing and other regulatory bodies, and governments to help better prepare the pharmacy workforce for the future. To this end, the project includes consultations with pharmacy and non-pharmacy stakeholders as well as a specific communication strategy with governments.

The proposal was submitted by the Canadian Pharmacists Association (CPhA) on behalf of the pharmacy sector to the Foreign Credential Recognition Program, Human Resources and Skills Development Canada (FCR-HRSDC). Our partners in this project are:

- National Association of Pharmacy Regulatory Authorities (NAPRA)
- Pharmacy Examining Board of Canada (PEBC)
- Canadian Association of Chain Drug Stores (CACDS)
- Canadian Society of Hospital Pharmacists (CSHP)
- Canadian Association of Pharmacy Technicians (CAPT)
- Association of Faculties of Pharmacy of Canada (AFPC)
- Association of Deans of Pharmacy of Canada (ADPC)

The PHRS will be a coordinated project structured into six phases (Phases I to VI). The project includes a series of 12 discrete but inter-related 'fact-finding studies' to gather information about the Canadian pharmacy workforce from a wide range of perspectives, including those of community and hospital pharmacists and pharmacy technicians in urban and non-urban settings across Canada, international pharmacy graduates participating in the pharmacy workforce, employers of community and hospital pharmacists, national and provincial licensing bodies, academic institutions responsible for developing the pharmacy workforce of the future, and their students, that is, future participants in the pharmacy workforce. The project will engage these stakeholders, as well as federal, provincial and territorial governments, and other agencies involved in initiatives relevant to pharmacy HR planning. The PHRS is to be completed over a 30-month period. CPhA has signed a Contribution Agreement with FCR-HRSDC.

1 Background

1.1 The pharmacy workforce

The pharmacy workforce in Canada consists of two major groups: pharmacists and pharmacy technicians.¹ Pharmacists and pharmacy technicians work in a wide range of settings including community pharmacies; hospital pharmacies; long-term care institutions; home care; ambulatory care; academic settings; the Canadian Armed Forces; pharmaceutical industry; public (federal/provincial) and private pharmaceutical benefit management companies; professional and regulatory associations; government; and pharmaceutical consulting.

There are currently over 28,000 licensed pharmacists in Canada. Pharmacists make up the third-largest segment of health professionals in Canada. Pharmacists are the only health profession whose education is entirely devoted to medications and their use. Approximately 75% of practicing pharmacists work in community pharmacies, representing about one pharmacist for every 1,500 Canadians. Another 15% of pharmacists (around 4,200) work in hospital pharmacies.² The remaining 10% of licensed pharmacists work in other settings.

Pharmacy technicians generally work under the supervision of licensed pharmacists. There are no accurate estimates of the total number of pharmacy technicians in Canada, or other demographic details about this part of the pharmacy workforce.

Pharmacists practicing in Canada are licensed with provincial/territorial pharmacy regulatory bodies. Pharmacy technicians are not bound by national or provincial licensing or credentialing standards.

The two most common practice settings for the pharmacy workforce – community pharmacies and public hospitals – represent for-profit and not-for-profit enterprises. In addition, community pharmacies range from small independent businesses to large corporate organizations.³ Despite the commercial orientation of community pharmacies, they derive a significant proportion of income from the dispensing of government-funded pharmaceuticals, and as such, their operations are regulated by government to some extent. The characteristics of community and hospital pharmacies vary widely, as do their strategic and business priorities, their financial pressures, and their incentives for change and innovation. These differences have important implications for pharmacy human resources planning.

1.2 Workforce shortages in the pharmacy sector

In the late 1990s, shortages in the pharmacist workforce became evident throughout Canada and much of the industrialised world. It was unclear initially if this shortage would be short-lived and self-correcting, as many previous shortages had been. However, a recent study in the United States has confirmed that pharmacist shortages have persisted over the five-year period 1999-2003.⁴ A situational analysis of pharmacy human resources in Canada, conducted in 2001, highlighted an on-going strong demand for pharmacists, a shortfall of approximately 2,000

1 In this proposal the term 'pharmacy technicians' includes pharmacy technicians, pharmacy assistants and pharmacy aides.

2 Canadian Pharmacists Association. Pharmacists and Primary Health Care, May 2004.

http://www.pharmacists.ca/content/about_cpha/whats_happening/cpha_in_action/pdf/primaryhealth2a.pdf

3 Deber RB. Delivering health care services: public, not-for-profit, or private? Commission on the Future of Health Care in Canada: Discussion Paper No. 17, August 2002. http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/17_Deber_E.pdf

4 Knapp KK, Quist RM, Walton SM, Miller LM. Update on the pharmacist shortage: national and state data through 2003. American Journal of Health-System Pharmacy 2005; 62: 492-499.

pharmacists nation-wide, and projections that this shortfall will grow as the workforce continues to age and retire, as feminisation of the workforce increases the proportion of pharmacists seeking part-time work, and as volumes of prescription drugs continue to rise.⁵ Two surveys of pharmacy owners in Canada in 2002 and 2004 have also examined pharmacist shortages. Although the overall response rates for the surveys were low, results were very consistent: in 2002, 47% of the owners who responded, and in 2004 48% who did so, reported pharmacist shortages in their own store. Importantly, the results in 2004 showed considerable regional variation, from a relative low of 43% in British Columbia to a high of 60% in Manitoba.⁶ Anecdotal reports indicate that shortages have forced various pharmacies to cut back services and hours of operation, including hospital pharmacies.

Pharmacist workforce shortages are also affecting the role and availability of pharmacy technicians. For example, one of the strategies already being employed to cope with the pharmacist shortage is to expand the role of pharmacy technicians. However, the quality of training and support provided to pharmacy technicians varies widely. Significant opportunities therefore exist to enhance and optimize the contributions of pharmacy technicians to the pharmacy workforce.

1.3 Internationally-trained pharmacists in Canada

International pharmacy graduates (IPGs) represent a significant portion of the pharmacist workforce in Canada. Since 2001, there have been significant increases in the numbers of IPG candidates successfully passing the Pharmacy Examining Board of Canada's (PEBC) Evaluation Examination and Qualifying Examination. In 2004, IPGs represented over one-third (38%) of applicants passing the PEBC's assessment to practise in Canada. Nonetheless, a substantial gap exists between the numbers of candidates that successfully pass the evaluation examination versus those that pass the qualifying examination, potentially suggesting the need for additional support for IPGs attempting the latter assessment.⁷

Trends in the numbers of Canadian and IPGs who successfully complete the PEBC Qualifying Examination show that the number of Canadian graduates steadied between 2001 and 2004, while the number of IPGs increased sharply over the same period.⁸ On the basis of these trends, the number of IPGs will exceed the number of Canadian graduates within the next three years. However, over the past four years Canadian faculties of pharmacies have made available some 700 or so places for new pharmacy enrolments, which should result in increased numbers of Canadian graduates in the next few years.

1.4 Changes affecting the pharmacy workforce

In recent years there has been a growing awareness that the full potential of the pharmacy workforce has not been realised, particularly its role in ensuring that patients and consumers are provided with the most appropriate treatment and have the knowledge and skills to use medicines to their best effect. Members of the 'medication team' - doctors, pharmacists, nurses and consumers - each have a role to play in ensuring medicines are used judiciously, appropriately,

5 Canadian Association of Chain Drug Stores (CACDS). Ipsos-Reid Survey: Pharmacist Shortages - A Warning Signal for Canadians, Nov 2001. <http://www.cacds.com/en/PDF/CACDS-Ipsos-Reid.PDF>

6 Pharmacy Post, Pharmacy practice, and L'actualité pharmaceutique. Trends and Insights 2004. <http://www.pharmacyconnects.com/resources/TrendsOnlineReport.pdf>

7 Canadian Pharmacists Association. International Pharmacy Graduates. Briefing to the Standing Committee on Citizenship and Immigration, March 10, 2005.

8 Data supplied by the Pharmacy Examining Board of Canada (PEBC).

safely and efficaciously. Reforms in the Canadian health system and the increasing shift towards greater self-care by patients are provoking changes in traditional roles, including those of pharmacists and pharmacy technicians. For example, these days pharmacists are visiting patients in their homes to assist with medication reviews and management; working more closely with physicians in selecting and monitoring drug therapies particularly among people with chronic illnesses; promoting healthy living and disease prevention strategies; and contributing to home care and other long-term care services. Pharmacy technicians are playing a larger role in dispensing medications, particularly in hospital pharmacies.

The recent emergence and growth of internet- and cross-border drug sales have introduced new challenges for pharmacy policy and professional practice. Other technology changes have already affected pharmacy practice, and there are clear indications of more changes ahead. E-prescribing is being pilot-tested and is likely to be implemented in Canada, across some provinces at least, in the near future. Considerable work is underway to develop and implement the electronic health record (EHR) and other information technology and communication tools to facilitate information exchange between health professionals and their patients. Various computer-based decision aids and practice guides are already being integrated into day-to-day pharmacy practice, and this trend will continue. The use of the Internet and web-based resources continues to increase exponentially. The integration of automated drug order and dispensing technology is also likely to increase, both in hospital and community settings.

These various changes have implications for the knowledge and competency requirements of the pharmacy workforce as well as workflow and work design. At present individual pharmacists and pharmacy technicians are responding to these changing requirements, but there is no strategy or plan in place to ensure that the workforce, as a group, is 'fit for purpose' for the work demands of the future. University faculties of pharmacy have been examining alternative options for entry level requirements, and several offer advanced degree programs. However, there is no coordinated process for ensuring that the pharmacy profession as a whole is receiving the labour market information it needs to prepare and educate pharmacists for the future. For example, the anticipated practice changes may require different practice partnerships, perhaps favouring more innovative models of practice, and a greater focus on communication and counselling skills than is currently the case.

1.5 Enhancing the role of pharmacists in better medication management and primary health care

Canadian governments' expenditures on drugs are escalating at a faster rate than other areas of the health care sector and are expected to continue to rise. Retail drugs are now the second largest health-spending category after hospitals and are expected to account for 17% (\$22 billion) of total health expenditures in 2004, compared to 9% (\$1.1 billion) twenty years ago. In 2004, pharmacies filled 381 million retail prescriptions. The public sector paid for 37% of drug costs and the private sector 63% (through private insurance or direct pay).⁹

In 2002, the Commission on the Future of Health Care in Canada recognised the growing role of prescription drugs in the delivery of health care.¹⁰ It predicted continued increases in both the supply of and demand for drugs, which would create significant challenges for governments trying to manage costs and ensure reasonable access to medically-necessary drugs. In 2003 and 2004,

⁹ Canadian Institute for Health Information. National Health Expenditure Trends 1975-2004. <http://www.cihi.ca>

¹⁰ Romanow RJ. Health Care Renewal: Building on values. Commission on the Future of Health Care in Canada, Final Report, November 2002. <http://www.hc-sc.gc.ca/english/care/romanow/index1.html>

First Ministers reaffirmed their commitment to promoting optimal drug use, best practices in drug prescription and better management of drug costs.^{11,12}

The two major drivers for rising drug expenditures are increases in the number of drugs used per patient, and shifts towards the use of newer, more expensive drugs.¹³ Increasing volumes of drugs used per patient may be necessary in order to achieve better health outcomes, particularly for people with chronic diseases. However, many drugs are not prescribed or used appropriately, and there is clear evidence that many people are not receiving drugs that could be of benefit to their health.^{14,15,16,17,18}

The pharmacy sector is central to better medication management and more optimal drug use, including more effective, appropriate and safe drug utilization, to achieve improved patient outcomes. In recent years there have been increasing calls for an expanded role for pharmacists within the Canadian healthcare system, particularly in primary health care. For example, the report of the Commission on the Future of Health Care in Canada states that “... *pharmacists can play an increasingly important role as part of the primary health care team, working with patients to ensure they are using medications appropriately and providing information to both physicians and patients about the effectiveness and appropriateness of certain drugs for certain conditions. This expanded role would allow pharmacists to consult with physicians and patients, monitor patients’ use of drugs and provide better information and communication on prescription drugs.*” Failure to address the pharmacist workforce shortage will compromise the ability of the profession to respond to these societal expectations.

Several provincial governments have recognised and supported new and expanded roles for pharmacists, particularly the participation of pharmacists in primary health care teams and better management of people with chronic illnesses.

These new and expanded roles for pharmacists have implications for professional knowledge and competency development (including university entry-level requirements and continuing education), for practice models, and for broader pharmacy HR planning.

1.6 The need for better health human resource planning

The 2003 First Ministers' Accord on Health Care Renewal recognized the importance of health human resource (HHR) planning, including the role of pharmacists: “*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).*” The First Ministers met again in September 2004, and

11 First Ministers' Meeting. First Ministers' Accord on Health Care Renewal, 2003. <http://www.hc-sc.gc.ca/english/hca2003/accord.html>

12 First Ministers' Meeting. A 10-year plan to strengthen health care, 2004. <http://www.hc-sc.gc.ca/english/hca2003/fmm/index.html>

13 Morgan S. Drug spending in Canada. Recent trends and causes. *Medical Care* 2004; 42: 635-642.

14 Canadian Pharmacists Association. Submission to the Romanow Commission on the future of health care in Canada, 2001. http://www.pharmacists.ca/content/about_cpha/whats_happening/government_affairs/pdf/romanow.pdf

15 Laurier C, Moride Y, Kennedy WA. Health survey data on potentially inappropriate geriatric drug use. *Annals of Pharmacotherapy* 2002; 36: 404-409.

16 Wilson K. Data rich, information poor - public plan perspective. *Advancing pharmaceuticals management: conference on drug utilization indicators, drug standards and drug statistics methodologies.* Ottawa, Nov 25, 2004.

17 Howard M, Dolovich L, Kaczorowski J, Sellors C, Sellors J. Prescribing of potentially inappropriate medications to elderly people. *Family Practice* 2004; 21: 244-247.

18 Health Quality Council of Saskatchewan (2004). More than one in four Saskatchewan seniors in long-term care dispensed potentially avoidable, high-risk drugs. Media release December 8, 2004. www.hqc.sk.ca/

their 10-year plan to strengthen health care addressed health human resources: *“First Ministers also recognize that improving access to care and reducing wait times will require ... strategic investments in areas such as: increasing the supply of health professionals (e.g., doctors, nurses and pharmacists)...”* They agreed *“to continue to accelerate their work on health human resources actions plans and/or initiatives to ensure an adequate supply and appropriate mix of health care professionals.”*

National consultations on health service priorities in Canada, held in 2001 and 2004, identified health human resource planning as the top priority needing attention if Canadians are to enjoy a strong and sustainable health system. The inaugural report of the Health Council of Canada, released in January 2005, also identified HHR planning as a priority area in need of ‘accelerated action’. The report noted that while significant HHR planning activity is currently underway, it is primarily focused on physicians and nurses. Further, *“... Canada is not self-sufficient in producing health care professionals and we continue to rely on a pool of internationally trained individuals”*.¹⁹

Canadian governments have invested extensively in HR planning for physicians and nurses for many years. The pharmacy sector, which represents the third-largest health workforce group, has not benefited from such investment and, in light of the repositioning of its role, deserves urgent attention.

1.7 A coordinated pharmacy HR plan

Clearly a coordinated, pan-Canadian plan for the pharmacy workforce is needed to ensure that there is the supply of enough appropriately trained and skilled pharmacists and pharmacy technicians to meet Canadians’ needs. It is also clear that the pharmacy sector cannot address its human resources issues in isolation. Although some of the factors influencing the pharmacy workforce are unique to this sector, there are common societal changes affecting human resources in all healthcare disciplines and the Canadian workforce in general. It is therefore imperative that the pharmacy sector co-ordinate its HR planning efforts with those of other disciplines, particularly the disciplines of medicine and nursing which are currently examining future roles and human resource strategies. Furthermore, assumptions about the supply and demand for pharmacists and pharmacy technicians will only be valid if they are based on correct assumptions about healthcare delivery models of the future, and the role that each healthcare discipline will play in that future system.

1.8 Next steps in pharmacy HR planning

Despite the significant number of projects and initiatives currently underway across Canada that have a bearing on the pharmacy workforce, many questions remain unanswered, particularly with regards to the structure of the pharmacy workforce and knowledge and competency requirements. Some examples are as follows.

Structure of the pharmacy workforce

- What factors are contributing to the pharmacist shortage? Will the current and predicted future pharmacy workforce shortages persist in light of changing roles and responsibilities?

¹⁹ Health Council of Canada. Health Care Renewal in Canada: Accelerating Change, January 2005. http://hcc-ccs.com/report/Annual_Report/report_index.aspx

- What effects do competing business drivers and health system drivers have on the size and structure of the community pharmacy workforce?
- What trends are emerging in the models of practice in pharmacy? What types of non-traditional practice models are emerging?
- What positions are filled by IPGs? Are they equally represented in community and hospital pharmacies, and across Canada? What are their experiences integrating into the Canadian pharmacy workforce? What are the experiences of employers of IPGs regarding their integration into the local practice environment?
- Are there factors unique to the pharmacy workforce in non-urban regions of Canada that need to be considered in a pharmacy HR plan?
- What are some of the common characteristics of licensed pharmacists who leave the profession? What factors contribute to their departure?
- How many pharmacy technicians are there in Canada? What are the demographic characteristics of this group? What are their roles and responsibilities, and do they vary across Canada? Is this workforce experiencing shortages?
- What is the nature of the working relationship between pharmacists and pharmacy technicians? How are roles and responsibilities divided? Are they the same in community and hospital pharmacies?
- What are the career paths of community and hospital pharmacists and pharmacy technicians? What factors influence participation and migration of pharmacists and pharmacy technicians between these two work settings? Within the community setting, what drivers influence pharmacists' participation in corporate versus more independent workplaces?
- What effect is internet pharmacy having on the pharmacy workforce?

Knowledge and competency requirements

- How is the pharmacy workforce responding to, and preparing for health system changes, such as greater interdisciplinary practice in primary health care, leadership in drug management, and integration of technology?
- How are Canadian university faculties of pharmacy responding to the changing knowledge and competency requirements of pharmacists? What issues and challenges exist? Should all Canadian universities shift to entry-level PharmD programs?
- How well are university-based bridging programs preparing IPGs for PEBC-licensing and integration into pharmacy practice in Canada? What issues and challenges exist? What are the expectations of IPGs who successfully complete such programs?
- What other supports could help IPGs to become licensed and integrated into pharmacy practice, for example self-assessment tools, mentorship programs, preceptor supports, and language training?
- What mechanisms exist to prepare and appropriately train pharmacy technicians for their roles in community and hospital pharmacies? What opportunities are there to strengthen the role of pharmacy technicians? Would certification and credentialing help or hinder the technician workforce?

Other

- To what extent are the issues that shape pharmacy HR planning similar to and different from the issues affecting other health workforces, specifically physicians and nurses? What opportunities are there for integrated HHR planning?
- What strategies might facilitate accelerated movement by the pharmacy profession towards the identified practice changes needed for Canada's health reforms?
- What mechanisms are needed to ensure coordination of pharmacy HR planning with other national, provincial and territorial health-related initiatives?

Clearly, there is a need for a body of work that answers the above questions, and that draws information from the many other initiatives already underway to ensure a comprehensive and integrated human resources plan for the pharmacy sector.

2 Purpose of the Pharmacy Human Resources Study

In order to answer the questions above, the project will undertake a comprehensive and coordinated body of work with four primary aims:

- To develop a comprehensive understanding of the pharmacy workforce in Canada, and the factors that influence its structure and the skills and competencies of its members.
- To identify short- and long-term human resource challenges facing the pharmacy sector that might need to be addressed in a pan-Canadian pharmacy HR plan.
- To identify challenges facing the pharmacy sector that might be specific to individual Canadian provinces and territories.
- To offer recommendations that will help ensure a pharmacy workforce fit for purpose for the future needs of Canadians and the Canadian health care system.

A key feature underpinning the project is an emphasis on building a common understanding among stakeholders about the pharmacy workforce and the challenges it faces, and consensus around options that may help to better prepare the pharmacy workforce for the future.

This proposal was submitted by the Canadian Pharmacists Association (CPhA) on behalf of the pharmacy sector. CPhA was founded in 1907 and is the national professional voluntary association providing leadership to pharmacists in all areas of practice. Our members are active in community and hospital pharmacies, in long term care facilities, home care, academia and industry. The CPhA serves the profession through advocacy; facilitation and provision of knowledge; participation in partnerships, research and innovation; education and health promotion.

CPhA is joined in this proposal by seven partners, representing the key stakeholder organisations in the pharmacy sector. They are:

National Association of Pharmacy Regulatory Authorities (NAPRA) - www.napra.ca

NAPRA's mandate is to facilitate the public protection activities of provincial pharmacy regulatory authorities at the national level.

Pharmacy Examining Board of Canada (PEBC) - www.pebc.ca

PEBC assesses the qualifications of pharmacists on behalf of participating provincial pharmacy regulatory authorities to ensure that entry-level pharmacists have the necessary professional knowledge, skills, and abilities to practise pharmacy. To that end, PEBC develops and administers a national Qualifying Examination and awards certificates of qualification to those applicants who pass the examination.

Canadian Association of Chain Drug Stores (CACDS) - www.cacds.com

CACDS is a national association representing community chain pharmacy members to federal and provincial governments; the trade; other sectors in the pharmaceutical, retail and packaged goods industry; the news media; and the public.

Canadian Society of Hospital Pharmacists (CSHP) - www.cshp.ca

CSHP is the national voluntary organization of pharmacists who share an interest in pharmacy practice in hospitals and related health care settings. CSHP's role is to provide leadership in all aspects of pharmacy practice in hospitals and related health care settings; to promote the provision of patient focused pharmacy services; and to represent and provide services to the membership.

Canadian Association of Pharmacy Technicians (CAPT) - www.capt.ca

CAPT is the national voluntary association providing leadership to and supporting the professional development of pharmacy technicians in the pursuit of providing optimal pharmaceutical services in collaboration with pharmacists. CAPT has subsidiary chapters or branches located across Canada offering local education and social events in areas where membership numbers support and utilize those services.

Association of Faculties of Pharmacy of Canada (AFPC) - www.afpc.info

AFPC deals with all aspects of pharmacy/pharmaceutical education and research. Its members include academic staff, the faculties, schools and colleges of pharmacy in Canada. Other groups and individuals interested in the goals and objectives of AFPC are eligible for associate membership.

Association of Deans of Pharmacy of Canada (ADPC)

ADPC comprises the Deans of the nine faculties of pharmacy in Canada.

CPhA and our partners have contributed significant time and resources towards this proposal, and the considerable work that pre-dates it. Our partners have also committed to ongoing support for the project once it commences, including self-funded participation in the Pharmacy stakeholder committee.

3 Components of the project

Our project comprises four key components:

- Engagement of stakeholders
- Project management and coordination
- Fact-finding studies
- Analysis and integration

These four key components are described in further detail in the following sections.

3.1 Engagement of stakeholders

In implementing the project and seeking to answer the kinds of questions listed above (in Section 1.8), it is essential that we consult and communicate regularly with stakeholders to ensure we build a common understanding of the issues affecting pharmacy HR and future HR planning. We therefore propose a specific government relations strategy to ensure engagement of governments, and a governance structure that brings together the wide range of stakeholders who might have a vested interest in the pharmacy workforce and a pan-Canadian pharmacy HR plan.

Government relations strategy

We propose a focused government relations strategy to ensure the project has ongoing awareness, engagement and support of F/P/T governments. In addition, F/P/T governments will be represented in the project's governance structure (see below). The government relations strategy will rely on regular and consistent communications between project representatives and government staff in decision-making roles relevant to health, health human resource planning, pharmaceuticals management, professional education, and domestic and foreign credentialing of health professionals. Such communications will provide governments with information about the planning, progress and key decision points of the project, and also create opportunities for governments to give relevant feedback and input about the conduct and outcomes of the project

Governance structure

We will establish a governance structure to oversee the conduct of the project, bringing together representatives from many stakeholder groups. This governance structure will have three components: an internal project management group; a pharmacy stakeholder committee; and an external advisory committee.

Internal project management group

This group will comprise project and other Canadian Pharmacists Association staff. The group will be led by CPhA's Professional Affairs Department, which has extensive experience in policy and research, including both small and large-scale projects funded by government.

Pharmacy Stakeholder Committee

The primary role of this committee will be to ensure the project is fulfilling its aims, and to provide guidance and advice on project-related matters. The committee will comprise representatives of the eight partner organisations supporting this proposal: CPhA, National Association of Pharmacy Regulatory Authorities (NAPRA), Pharmacy Examining Board of Canada (PEBC), Canadian Association of Chain Drug Stores (CACDS), Canadian Society of Hospital Pharmacists (CSHP), Canadian Association of Pharmacy Technicians (CAPT), Association of Faculties of Pharmacy of Canada (AFPC), and Association of Deans of Pharmacy of Canada (ADPC).

Representatives of the FCR Program of Human Resources and Skills Development Canada (HRSDC) will also be invited to participate as observers. The principle of consensus will guide all substantive decisions. It is envisaged that this committee will meet approximately every 1-3 months, through a combination of teleconferences and face-to-face meetings.

External Advisory Committee

The purpose of this committee is to bring together the perspectives and views of the wide range of stakeholders with a vested interest in pharmacy HR and HHR planning. This committee will therefore be large, so we propose to hold a maximum of two face-to-face meetings per year, and no more than five meetings over the life of the project. All members of the Pharmacy Stakeholder Committee will be invited to attend meetings of the External Advisory Committee. Representatives of HRSDC's FCR program will also be invited to participate as observers. The full membership of the external advisory committee will be developed in consultation with HRSDC and our Pharmacy Sector partners.

Other communications with stakeholders

We will establish a website, hosted by the CPhA, to provide access for pharmacy and non-pharmacy stakeholders to information about the project and its progression.

Towards the end of the project, we will also undertake a series of meetings across Canada to communicate the major findings of the project, and their implications for the pharmacy profession and HHR planning. Regional meetings will include feedback and insights specific to the pharmacy workforces in individual provinces and territories.

3.2 Project management and coordination

CPhA will have overall responsibility for the conduct of this project, and ensuring that the project objectives are achieved, on time and on budget. CPhA will therefore oversee a wide range of project activities including:

- ongoing liaison with HRSDC about the project, including contractual arrangements and reporting obligations
- establishment of the project team, governance structure and accounting and bookkeeping services for the project
- ongoing secretarial and administrative services for committee meetings, including meeting scheduling/notification, agenda and minutes, conference calls, meals, equipment, supplies, travel arrangements, translation and other services/materials required
- preparation and management of tendering processes associated with various project studies (see Section 3.3) in consultation with HRSDC
- selection and contracting of independent consultant/researcher(s) involved in various project studies, and subsequent supervision and oversight of them
- overall coordination, management and tracking of project studies
- production of regular communications, papers and reports relevant to the project (including project web site development and management)

3.3 Fact-finding studies

This project is structured around twelve (12) fact-finding studies, designed to assist us in gathering key information so that we can answer the questions listed previously in Section 1.8. It

is envisaged that some studies will be conducted in parallel at the same locations with different target groups, to achieve economies of scale and, resource and time efficiencies (for example, Studies 2, 4, 6 and 7). We anticipate that the project team will conduct Studies 1 and 12; and that a small number of independent external consultant/researcher(s) will undertake the remaining studies, selected through competitive tendering processes.

It will be a requirement of all studies that a check is made for any current data collection processes that could contribute relevant information to this project, or could provide a mechanism for the collection of information needed by this project. For example, it may be more cost-effective for the project to 'piggy-back' a series of questions onto a survey funded and conducted by another organisation rather than conduct an independent survey.

The 12 fact-finding studies are:

- Study 1** *Current knowledge about the pharmacy workforce in Canada and its future role(s)*. A summary report will be prepared identifying our current knowledge of issues relevant to the pharmacy workforce in Canada, drawing on the findings of the report, *A Situational Analysis of Human Resource Issues in the Pharmacy Profession in Canada*, other recent relevant pharmacy human resources publications and available statistics (e.g., numbers of licensed pharmacists, domestically- and internationally-trained candidates completing PEBC assessments, student places in pharmacy faculties). The summary report will also consider the range of professional practice roles for the pharmacy workforce of the future, including expanded roles in community and hospital pharmacy practice. This report will form the basis for initial consultations with governments and other stakeholders to establish a shared understanding of issues for consideration in pharmacy HR planning.
- Study 2** *Descriptive information about the Canadian pharmacy workforce*. Descriptive information will be collected through surveys with representative samples of pharmacists and pharmacy technicians within community, hospital and other pharmacy settings, for all provinces and territories and in urban and non-urban regions. Focus groups will also be held with 50 pharmacists and 30 pharmacy technicians. Both quantitative and qualitative information will be collected, including details about practice models; current and changing roles and responsibilities; factors influencing career path decisions; factors associated with migration between community, hospital and other settings; issues associated with knowledge and competency training and development needs; work satisfaction and quality of life; and readiness and incentives for practice change.
- Study 3** *Quantifying the pharmacy technician workforce*. There are no accurate estimates of the total number of pharmacy technicians in Canada, or other demographic details about this workforce. It is beyond the scope of this project to establish a routine data collection mechanism for information about pharmacy technicians. However, a survey will be conducted with the aim of providing an estimate of the size and nature of the pharmacy technician workforce in Canada, including basic demographic information (gender, age, years of work experience, formal studies, places of work, salary, hours per week, etc.).
- Study 4** *Descriptive information about IPGs participating in the Canadian pharmacy workforce*. A survey will be undertaken with a representative sample of IPGs who have entered the pharmacy workforce since 2000, within community and hospital pharmacy settings, and in urban and non-urban regions. Focus groups will also be held with 30 IPGs. Reference will be made to the findings of a recent survey with IPGs

undertaken by the University of Toronto, in the formulation of the present survey and focus group discussions. Both quantitative and qualitative information will be collected, including details about national and provincial licensing processes; experiences with IPG-bridging programs; facilitators and barriers to entering the workforce; distribution, roles, responsibilities and experiences in pharmacy practice; unmet training and support needs; and work satisfaction and quality of life.

Study 5 *Integration and Licensing of International Pharmacy Graduates in Canada.* This study will comprise two components, the first focused on licensing and the second on educational support programs for IPGs.

Licensing: interviews will be undertaken with representatives of the PEBC, NAPRA and a subset of five (5) of the provincial regulatory bodies responsible for licensing IPGs in Canada. Predominantly qualitative information will be collected, including details about national and provincial licensing processes; experiences with IPG-bridging programs; perceived facilitators and barriers for IPGs becoming licensed to practice; and unmet training and support needs. Focus groups will also be held with 20 IPGs who have had difficulties obtaining PEBC certification and/or provincial licensing to identify the primary barriers and initiatives that might help to overcome them.

IPG educational support programs: an environmental scan will be undertaken to identify and describe currently available pharmacy clinical knowledge and skills education programs available to IPGs by universities, community colleges, private sector organizations and professional pharmacy associations. Such programs will be identified by contacting PEBC, provincial pharmacy regulatory organizations, faculties of pharmacy and major pharmacy chains. Information on the programs will be obtained through interviews. More detailed interviews will be undertaken with representatives of the IPG-bridging programs at the Universities of Toronto and British Columbia to understand issues affecting the uptake and success of IPG-bridging programs, and the experiences of the participants in these programs.

Study 6 *Pharmacy HR issues identified by employers, including those specific to IPGs.* A survey will be undertaken with a representative sample of managers who have responsibilities for recruiting pharmacy staff in community pharmacy, and managers in hospital pharmacy, in urban and non-urban regions. More detailed interviews will also be done with 25 employers. Predominantly qualitative information will be collected, exploring the effects of business, health system, and other drivers on the structure and roles of the pharmacy workforce; workforce supply and demand issues; the effect of internet pharmacies; experiences with IPG employees; details about practice models and innovations; current and changing roles and responsibilities of pharmacy staff; factors associated with the recruitment, retention and loss of pharmacy staff; issues associated with knowledge and competency training and development needs of pharmacy staff; and work satisfaction and quality of life of staff.

Study 7 *Description of current and future pharmacy practice models.* Drawing on the findings from Studies 2, 4 and 5, an analysis will be undertaken of the range of pharmacy practice models currently used in community and hospital pharmacy, including innovative models of models.²⁰ A limited number of targeted site visits will

²⁰ For the purposes of this project, a 'pharmacy practice model' is defined as a generalised representation of the manner in which pharmacy is practised with attention to issues such as the site of practice; style and scope of practice; reimbursement model; nature of relationships between pharmacists, physicians, nurses, other allied health professionals and patients; and societal expectations of the pharmacy service delivered.

also be undertaken. Consideration will be given to probable changes in practice models, and educational and competency requirements of the future, given the identified changes in the roles of pharmacists and pharmacy technicians in primary care, ambulatory care, home care, hospital care, and interdisciplinary health care teams.

- Study 8** ***Roles of faculties of pharmacy and pharmacy technician programs in meeting pharmacy workforce needs.*** Interviews will be undertaken with approximately 20 representatives of the Faculties of Pharmacy in Canada, including Deans and course coordinators, as well as representatives from the Pharmacy Technician Educators Group. Predominantly qualitative information will be collected, examining issues such as the strategies in place to meet identified pharmacist shortages in Canada (such as increased enrolments); plans to meet the knowledge and competency training and development needs of pharmacists and pharmacy technicians in the future (including the role of PharmD and other advanced degrees, and continuing education programs).
- Study 9** ***Attitudes and experiences of students enrolled in pharmacy faculties and pharmacy technician training programs.*** Descriptive information will be collected through surveys with representative samples of students enrolled in pharmacy faculties and pharmacy technician training programs. Focus groups will also be held with 20 pharmacy students and 20 pharmacy technician students. Both quantitative and qualitative information will be collected, including motivators for studying pharmacy; opinions about the study experience and possible changes in entry-level requirements; attitudes and expectations about participating in the pharmacy workforce; and anticipated career paths.
- Study 10** ***Evaluation of the introduction of certification for pharmacy technicians.*** An analysis will be undertaken of the feasibility of introducing national certification for pharmacy technicians, including advantages and disadvantages. The analysis will include interviews with PEBC, NAPRA, CAPT, and a subset of five (5) of the provincial licensing organizations to assess their possible role in such a process, and options for developing minimum common competency standards to facilitate transferability of technicians across provinces (including the applicability of the 'Proposed Standards of Practice for Registered Pharmacy Technicians', developed by the Ontario College of Pharmacists).
- Study 11** ***Descriptive information about licensed but non-practising pharmacists.*** Interviews will be undertaken with a representative sample of 30 licensed but non-practising pharmacists to identify common characteristics among this group; and factors that contributed to them leaving the pharmacy workforce. These pharmacists will be identified with the assistance of provincial licensing bodies. (Pharmacists who no longer maintain a license would be very difficult to identify.)
- Study 12** ***Effect of broader labour force and HHR issues for the pharmacy workforce.*** An analysis will be undertaken of the relevance of broader issues affecting the Canadian workforce and the health workforce for the pharmacy workforce. Such broader issues may include increasing shifts towards part-time work, workforce shortages, health system reforms, changing job demands, and changing worker expectations. This analysis will be supported by an expert taskforce and also draw on findings from the recent physician and nursing sector studies to identify issues of relevance to the pharmacy sector. It will also be informed by feedback obtained during regional meetings with P/T government and other local stakeholders, scheduled to be held in the final phase of the project.

Note: Existing data on pharmacists and employers of pharmacists can be used to help ensure that those participating in the above studies comprise representative samples. This is not the case for pharmacy technicians and IPGs since no national, provincial or territorial data exist. Efforts will be made to obtain unbiased samples, but this cannot be assured. All sample sizes quoted above are estimates, and the project budget in Section 5 is based on these estimates.

3.4 Analysis and integration

The 12 fact-finding studies will yield a substantial amount of valuable and new information. There will be a number of reports progressively arising from the completion of the individual studies. In addition, the information will need to be integrated to ensure that the discrete studies and related works collectively answer all of the identified questions, and to make recommendations that will support pharmacy HR planning in the future. This process of integration will also ensure that other initiatives relevant to pharmacy HR planning, such as the database development work being undertaken by the Canadian Institute for Health Information, current developmental work for other internationally trained health professionals being coordinated by Health Canada, and the physician and nursing HR sector studies, are considered. It is envisaged this work of analysis and integration will be undertaken by the project team in consultation with the Pharmacy Stakeholder Committee and the External Advisory Committee.

In addition, we will establish 3-4 special taskforce groups during the life of the project to provide specific expertise and advice (for example, one in areas such as labour force analysis, large-scale HR planning, and government HR policy development, and another with expertise in internationally pharmacy graduate and credentialing issues), and recruit members accordingly. These groups will be time-limited and task-specific, and comprise approximately 4-6 members. The aim of these groups is to draw on expertise that may not exist within the pharmacy profession per se, to support broader interpretation and analysis of the data from the fact-finding studies, and to assist with the development of recommendations.

4 Project plan and timetable

We have structured our overall project plan into six phases (Phases I-VI) to be carried out over a 30-month period. Studies 1-11 will be conducted during Phases I-IV, and Study 12 in Phase V. We envisage the project team leading Studies 1 and 12, and a small number of independent consultant/researcher(s) assisting with the remaining studies.

The key tasks and associated timeframes for the six phases of the project are summarised in the table below, followed by a detailed breakdown of specific actions and deliverables.

Phase	Timeframe (months)	Key Tasks	Deliverables to stakeholders
I	1-3	Establish governance and project management structures	Governance and project management structure and project team
II	4-6	Complete Study 1 and establish common knowledge base among stakeholders Commence fact-finding studies 2-7	Summary report of current knowledge about the Canadian pharmacy workforce and future directions (Study 1)

			Project website for communicating with stakeholders
III	7-12	Progress fact-finding studies 2-7 Commence fact-finding studies 8-11	Progress reports on Studies 2-7
IV	13-18	Report results from fact-finding studies 2-7 Progress fact-finding studies 8-11	Reports on findings of Studies 2-7 Progress reports on Studies 8-11
V	19-26	Report results from fact-finding studies 8-11 Analysing and integrating the results (Study 12)	Reports on findings of Studies 8-11
VI	27-30	Consult with stakeholders and obtain endorsement of recommendations	Final draft report integrating all findings, for stakeholder consultation and feedback Regional meetings to obtain stakeholder feedback Final report submitted to HRSDC

4.1 Activities

Phase I - Establishing governance and project management structures

Months 1-3

- establish the project office, including hiring of a project manager and establishing administrative and project infrastructure
- develop implementation plan for government relations strategy to ensure regular communications and reporting with F/P/T governments and the Task Force on Internationally Educated Health Professionals (IEHP)
- establish the governance structure with three components: CPhA internal project management group; pharmacy stakeholder committee; external advisory committee
- establish the first special taskforce group to provide expertise and advice on labour force analysis and planning
- commence work on the summary report of current knowledge about the pharmacy workforce in Canada and future directions (Study 1)
- commence work, in consultation with HRSDC, on the development of a Request for Proposal (RFP) for a Communications Consultant ; issue RFP and select consultant
- commence work, in consultation with HRSDC, on the development of Requests for Proposals (RFPs) and selection criteria for Studies 2-7
- commence work on the development of a website for the project

Phase II - Building a common knowledge base among stakeholders

Months 4-6

- produce summary report of current knowledge about the pharmacy workforce in Canada and future directions (Study 1)

- present summary report to Pharmacy Stakeholder Committee, External Advisory Committee, and F/P/T governments for discussion and feedback to establish shared understanding of current knowledge of pharmacy workforce issues and future directions
- promote project website to stakeholders, and make summary report available
- issue RFPs for Studies 2-7
- select consultant/researcher(s) to undertake Studies 2-7, and agree on project plans, timelines, deliverables and payment schedules
- commence work on Studies 2-7

Phase III - Progressing the fact-finding studies

Months 7-12

- work with consultant/researcher(s) to progress Studies 2-7
- provide progress report(s) to Pharmacy Stakeholder Committee, External Advisory Committee, and F/P/T governments for information
- commence work, in consultation with HRSDC, on the development of RFPs and selection criteria for Studies 8-11
- issue RFPs for Studies 8-11
- select consultant/researcher(s) to undertake Studies 8-11, and agree on project plans, timelines, deliverables and payment schedules
- commence work on Studies 8-11

Phase IV - Results from the fact-finding studies

Months 13-18

- receive reports from consultant/researcher(s) for Studies 2-7
- establish the second special taskforce group to provide expertise and advice on IPG issues arising from Studies 2-7
- present findings from Studies 2-7 to Pharmacy Stakeholder Committee, External Advisory Committee, and F/P/T governments for discussion and feedback to establish shared understanding of practice and workforce issues identified by pharmacists, pharmacy technicians, IPGs working in the pharmacy sector, licensing of IPGs, and pharmacy employers
- work with consultant/researcher(s) to progress and review Studies 8-11
- provide progress report(s) to Pharmacy Stakeholder Committee, External Advisory Committee, and F/P/T governments for information
- develop a detailed 'in-house' study plan for Study 12
- establish taskforce to inform Study 12

Phase V - Analysis and integration

Months 19-26

- receive reports from consultant/researcher(s) for Studies 8-11
- present findings from Studies 8-11 to Pharmacy Stakeholder Committee, External Advisory Committee, and F/P/T governments for discussion and feedback to establish shared understanding of issues associated with knowledge and competency training across the pharmacy workforce, credentialing of pharmacy technicians, and issues influencing workforce attrition
- undertake and complete work on Study 12

- commence drafting final report, integrating results from fact-finding studies and input from Pharmacy Stakeholder Committee, External Advisory Committee, and F/P/T governments that are of relevance to a pan-Canadian pharmacy HR strategy

Phase VI - Final stakeholder consultation and endorsement

Months 27-30

- translate draft version of final report into French
- present draft version of final report to Pharmacy Stakeholder Committee, External Advisory Committee, Task Force on Internationally Educated Health Professionals (IEHP) and F/P/T governments for discussion and feedback
- circulate amended draft report to stakeholders for wider consultation and feedback (by mail/email)
- undertake 5-6 regional meetings across Canada to communicate to local stakeholders the major findings of the project and their implications for the pharmacy profession and HHR planning, including providing feedback and insights specific to the pharmacy workforces in individual provinces and territories
- prepare final report incorporating all feedback and submit to HRSDC for review with respect to content specified in the contribution agreement and appropriate acknowledgement of funding
- translate final version of report into French
- Distribute final report via web site and e-mail to stakeholders and other interested parties
- within 60 days of the end of the project, produce and submit a final project report to Human Resources and Skills Development Canada that outlines the project objectives, activities and outcomes and provides an evaluation of the project describing successes and challenges.

4.2 Outcomes

The project will produce a comprehensive report on pharmacy human resources in Canada, with special attention to internationally educated pharmacists, that is based on original research and analysis and includes recommendations for future action. Expected outcomes include:

- Meeting the needs expressed by pharmacy stakeholders across Canada for improved HR planning for the pharmacy workforce.
- A significant body of new knowledge, and a common understanding among relevant stakeholders, about the pharmacy workforce and the challenges it faces.
- Recommendations of relevance to and agreed upon by the profession, educational institutions, licensing and other regulatory bodies, and governments to help better prepare the pharmacy workforce for the future.