

# An Environmental Scan of Pharmacy Technicians

(Roles and responsibilities, education  
and accreditation, and certification)





# An Environmental Scan of Pharmacy Technicians

(Roles and responsibilities, education  
and accreditation, and certification)

October 2006

Prepared for

Moving Forward: Pharmacy Human Resources for the Future

Prepared by:

Jim Blackburn, Pharm.D.

Blackburn & Associates

Saskatoon, SK

---

### How to cite this document:

Management Committee, *Moving Forward: Pharmacy Human Resources for the Future*. Environmental Scan of Pharmacy Technicians: Roles and responsibilities, education and accreditation, and certification. Ottawa (ON). Canadian Pharmacists Association; (2006)

# TABLE OF CONTENTS

Executive Summary .....	1
Introduction .....	3
Background .....	4
National Landscape .....	5
Canadian Pharmacists Association .....	5
Canadian Association of Chain Drug Stores .....	5
Canadian Association of Pharmacy Technicians .....	6
Canadian Council for Accreditation of Pharmacy Programs .....	6
Canadian Pharmacy Technician Educators Association .....	6
Canadian Society of Hospital Pharmacists .....	7
National Association of Pharmacy Regulatory Authorities .....	8
The Pharmacy Examining Board of Canada .....	8
The Provincial Landscape .....	9
Alberta .....	9
British Columbia .....	10
Manitoba .....	11
New Brunswick .....	11
Newfoundland and Labrador .....	12
Nova Scotia .....	12
Ontario .....	12
Prince Edward Island .....	14
Québec .....	14
Saskatchewan .....	15
Territorial Regulatory Authorities .....	15
The International Landscape .....	16
Australia .....	16
Denmark .....	17
New Zealand .....	17
The United Kingdom .....	18
The United States of America .....	19
Conclusion .....	23
Appendix A — Associations and individuals contributing to the preparation of the Environmental Scan of Pharmacy Technicians, 2006 .....	24
Appendix B — Reference and Reading List .....	26
Appendix C — Educational Outcomes for Pharmacy Technician Programs in Canada — Draft for Consultation, August, 2006 .....	28
Appendix D — Pharmacy Technician Programs in Canada .....	29

# EXECUTIVE SUMMARY

This environmental scan of pharmacy technicians is intended to develop an accurate summary of knowledge, issues and activities relating to the roles and responsibilities, curriculum and accreditation, and certification of pharmacy technicians in Canada, from a national, provincial, territorial and international perspective.

It seems that after many years of “watchful waiting” there is now widespread activity relating to the regulation and certification of pharmacy technicians and the accreditation of pharmacy technician programs. This progress is being achieved because there seems to be a consensus of the pharmacy professional and regulatory associations along with pharmacy technician educators and practitioners that these actions will improve the medication management system for the betterment of the provision of drug therapy to the Canadian population. Also, commissions of inquiry into the health system and recent workforce planning initiatives have recommended better utilization of human resources in the health sector. In addition to the consensus, there is willingness by all stakeholder groups for an intensive collaborative approach to achieving these outcomes.

The development processes for regulation of pharmacy technicians is proceeding in Ontario, Alberta and potentially British Columbia with the remaining provincial pharmacy and pharmacy technician associations generally supportive of this action. It will be interesting to see how the two distinctly different regulatory approaches of Ontario (under the College of Pharmacists) and Alberta (Canadian Association of Pharmacy Technicians Alberta Chapter as a distinct health profession) fare in their dealings with their respective governments.

Ontario and subsequently, Alberta, have established voluntary pharmacy technician certification and continuing certification policies and procedures. There now appears to be genuine support for the establishment of a national certification process with the potential involvement of the Pharmacy Examining Board of Canada.

Going hand in hand with the certification process is the need to establish standards for the pharmacy technician

education programs throughout Canada. The Canadian Pharmacy Technician Educators Association (CPTTEA) with the primary support of the Ontario College of Pharmacists (OCP) has established a draft set of national educational outcomes for pharmacy technician programs. In concert with that process, the Canadian Council for Accreditation of Pharmacy Programs, along with pharmacy and pharmacy technician stakeholder groups, are developing proposed policies and procedures for the accreditation of pharmacy technician programs based upon the educational outcomes.

The Canadian Pharmacists Association is leading another vital component in this change process by collaborating with pharmacy stakeholders to establish the “*Blueprint for Action for the Pharmacy Profession*”. The Blueprint contains many regulations specifically concerning the education, roles and responsibilities, certification and regulation of pharmacy technicians. This action plan is needed to ascertain that change is being made for the betterment of health care for Canadians.

On the international scene, there are similarities in developments in the respective countries included in this scan. The regulatory actions for additional prescribing responsibilities for pharmacists in the United Kingdom, together with the recent proposal for regulation of pharmacy technicians, are significant steps. Changes are also documented in Australia, New Zealand and the USA. Denmark was added to this scan to identify the significant increased responsibility for pharmacy assistants. The Danish Pharmacy Assistant Education Program produces a “pharmaco-nomist” who has been delegated the ability to dispense prescriptions and advise on and sell medications.

*Since there is impending legislation in several provinces and other actions being undertaken that may significantly affect the current environment respecting the roles, regulation, certification and education of pharmacy technicians, a revised environmental scan will be prepared in 2007 to include changes within the Canadian scene.*

# INTRODUCTION

In the late 1990's, a nationwide shortage of pharmacists was recognized as causing serious pharmacy human resources challenges for hospitals and community pharmacies, and potential threats to the health of Canadians. Since then, significant shifts in the role of pharmacists, including greater participation in primary health care and a renewed focus on better medication management, have introduced additional challenges to the pharmacy workforce – how do we increase the scope of activities of a profession already pressured to do too much, without enough staff to accomplish it all? Partial solutions to this situation, such as expanding the role of pharmacy technicians, and improving the uptake and integration of international pharmacy graduates, bring added educational, regulatory and cultural complexities to these challenges.

Since then, pharmacy sector stakeholders have invested significant time, money and resources working together to initiate the development of a study to investigate and address pharmacy human resources issues. In addition the federal, provincial and territorial (FPT) governments have all recognized the importance of collaborative, pan-Canadian health human resource planning, and pharmacy has now been identified as high priority health profession needing attention if Canadians are to enjoy a strong and sustainable health care system.

These efforts reached a successful common goal in October 2005 when the Foreign Credential Recognition program of Human Resources and Social Development Canada awarded the Canadian Pharmacists Association (CPhA) and its pharmacy stakeholder partners (including the Association of Deans of Pharmacy of Canada (ADPC), the Association of Faculties of Pharmacy of Canada (AFPC), the Canadian Association of Chain Drug Stores (CACDS), the Canadian Association of Pharmacy Technicians (CAPT), the Canadian Society of Hospital Pharmacists (CSHP), the National Association of Pharmacy Regulatory Authorities (NAPRA) and the Pharmacy Examining Board of Canada (PEBC) with a \$1.48 Million contribution agreement to fund a Pharmacy Human Resources Study.

The Pharmacy Human Resources Study will gather essential information required for the development of a pan-

Canadian human resources strategy for the pharmacy workforce, and pharmacy technicians have been identified as a top research priority. The size and nature of the pharmacy technician segment of the pharmacy workforce is an unknown quantity. Roles and responsibilities vary widely - pharmacy technicians are also unregulated, no national credentialing standards exist for this group, and they present a mix of individuals receiving formal college training, private institution training, or on-the-job training. And, given that pharmacy technicians are well poised to take on a number of technical responsibilities delegated by pharmacists, the expanded use of pharmacy technicians is a potential facilitator in advancing the role of the pharmacist, as well as addressing workforce HR issues such as shortages, pharmacist burn-out and job satisfaction. An understanding of the demographics of this workforce segment, their roles and responsibilities, their readiness for practice change, and the resulting education, training and credentialing changes that might accompany this is essential for the development of any HR planning or recommendations in all areas.

As one of the initial components in the study, this environmental scan has been commissioned to develop an accurate summary of knowledge, issues and activities relating to the roles and responsibilities, curriculum and accreditation, certification and regulation of pharmacy technicians in Canada, from a national, provincial, territorial and international perspective. The main objectives of this environmental scan are to:

- Develop a body of knowledge to further the understanding of the pharmacy technician workforce.
- Serve as a background research and data for other pharmacy technician HR analyses that will form part of the larger Pharmacy HR Study.
- Create a critical piece of labour force information necessary to both pharmacy HR planning and overall HHR planning.

In 2001, CPhA produced an Environmental Scan on Pharmacy Technicians in Canada. Much has changed since that time, and this paper has been prepared to update and expand that information.

# BACKGROUND

---

There are over 29,000 pharmacists licensed to practice in Canada. Of those actively practicing, available statistics show 71 % in community pharmacies, 15 % in hospital pharmacies and 14 % practicing in other settings. The pharmacy workplace includes over 8,000 community pharmacies (including chain drug stores, independents, banners, franchises and department store/supermarket pharmacies) across Canada, and more than 300 inpatient hospital pharmacies.

It is very difficult to estimate the number of pharmacy technician /pharmacy assistants in Canada (potentially 40,000–80,000) and the Pharmacy Human Resources in Canada Study 3 will attempt to quantify the pharmacy technician workforce.

Pharmacy technicians and related support staff are an integral part of the day-to-day functioning of pharmacies across the country. Only a pharmacist may dispense drugs, but pharmacy technicians work under the direction and supervision of pharmacists in technical aspects of that work. They provide necessary technical services related to preparing, labelling and providing medications, managing third party drug plan claims, medical device training, dispensary management, and in some settings, prescription

product verification. However, hospital pharmacy practice tends to be much more specialized than in community settings. The skills required of hospital technicians are more variable and complex, and their roles and responsibilities (including the permissible delegation of certain tasks from the pharmacist to the technician) are more clearly structured and defined.

An expansion of the roles and responsibilities of pharmacy technicians is one obvious solution to the workplace challenges currently facing the pharmacy sector. This would allow pharmacists to transfer some of their technical workload to qualified technicians, freeing up their time to devote to more cognitive functions and direct patient care. In order for this to happen, technicians must be reliably competent in performing these tasks. The positive interaction of the pharmacist/ pharmacy technician team is critical to the delivery of pharmaceutical care in today's healthcare environment; the pharmacy employer, pharmacist, pharmacy technician and patient all benefit from this special relationship. The better qualified the pharmacy technician, the higher the quality of care this team may bring to the patient and the greater the value they bring to the pharmacy.

# NATIONAL LANDSCAPE

## CANADIAN PHARMACISTS ASSOCIATION

([www.pharmacists.ca](http://www.pharmacists.ca))

The Canadian Pharmacists Association (CPhA) is the national, voluntary organization of pharmacists, committed to providing leadership for the profession and improving the health of Canadians. CPhA members include community, hospital, academia, consultant, government and industry-based pharmacists, as well as pharmacy students. CPhA is currently leading the pharmacy human resources study on pharmacists and pharmacy technicians.

CPhA has long recognized the need to optimize the role of pharmacy technicians within the pharmacy workforce and to allow them to take on greater responsibility in the technical aspects of drug distribution. An enhanced role for the pharmacy technician is seen as a key enabler to support an expanded role for pharmacists in medication management to improve the safety and effectiveness of drug therapy.

In 2001, CPhA passed a resolution at their annual meeting that “CPhA research, review and make recommendations to the profession on the roles and responsibilities, training and certification of pharmacy technicians and that CPhA work closely with pharmacy stakeholders and Canadian Association of Pharmacy Technicians (CAPT) to develop and establish standards and guidelines to allow technicians to assume appropriate responsibilities within pharmacy”. CPhA facilitated a meeting of key pharmacy stakeholders in April 2002 to discuss a collaborative, national strategy to address the key issues. There was consensus on the need to develop the role and competency of pharmacy technicians to support enhanced pharmaceutical care, through the development of national competencies, voluntary certification and accreditation programs for pharmacy technicians. Specific discussions regarding regulation did not occur. CPhA supports in principle the Ontario College of Pharmacists’ (OCP) proposed regulation of pharmacy technicians, but recognizes there are a number of issues that need to be addressed prior to this becoming effective.

CPhA is also in the process of developing a “*Blueprint for Action for the Pharmacy Profession*” and is seeking collaboration with pharmacy stakeholder groups to reach a consensus on the blueprint. The Blueprint will identify structural, legislative, policy, program and funding requirements to support change in the pharmacy profession and will

identify actions over the next 5-10 years necessary to move the profession forward. Elements of the Blueprint include: role change and pharmacy practice models; pharmacy human resources; pharmacy education and continuing professional development; information and communications technology; financial viability and sustainability; legislation, regulation and liability; and leadership for the profession. Many of the recommendations within these elements are targeted specifically towards pharmacy technicians. This action document has the potential to provide the vision for introducing change to the human resource components of our profession.

## CANADIAN ASSOCIATION OF CHAIN DRUG STORES

([www.cacds.com](http://www.cacds.com))

The Canadian Association of Chain Drug Stores (CACDS) represents community chain pharmacy stores across the country, including traditional drug stores, grocery chains, and mass merchandisers with pharmacies. In 2004 CACDS members employed almost 15,000 pharmacists and 17,000 pharmacy technicians. Members reported that pharmacy technicians were taking on expanding roles during the past year. Every chain has technicians participating in receiving and filling of prescriptions and inventory control functions while there is an increased use of technicians in dispensary management. Eighty three per cent of drug chains and 71% of grocery store chains state that they are realizing the importance of an expanded and better defined role for pharmacy technicians.

## CANADIAN ASSOCIATION OF PHARMACY TECHNICIANS

([www.capt.ca](http://www.capt.ca))

The Canadian Association of Pharmacy Technicians (CAPT) is a national voluntary association providing leadership to and support of the professional development of pharmacy technicians in the pursuit of providing optimal pharmaceutical services in collaboration with pharmacists. CAPT originated in 1983 and experienced slow growth in the organization membership to around 300 members in 2000. At that time, most of the membership was in the Toronto area and in Alberta, where the chapter was formed in 1994.

## NATIONAL LANDSCAPE CONT'D

Within the past six years, CAPT has witnessed a remarkable increase in membership. The Association now has a membership of 2500 with nine chapters (four in Ontario with one each in Alberta, Vancouver, Manitoba, Nova Scotia and Saskatchewan). Approximately 50 % of the membership is in chapters and the remaining individual members are located across all provinces and territories.

CAPT has wide open membership with no predefined standards for background or training.

### CANADIAN COUNCIL FOR ACCREDITATION OF PHARMACY PROGRAMS

([www.ccapp-accredit.ca](http://www.ccapp-accredit.ca))

The Canadian Council for Accreditation of Pharmacy Programs (CCAPP) was established in 1993 with the mission to evaluate the quality of pharmacy professional degree programs in Canadian universities and to promote continued improvement of such programs. In 2002, the Board passed a motion, "that CCAPP proceed to develop a pharmacy technician accreditation program based on the model developed for Pharmacy Faculties, and subject to (a) the establishment of technician competencies by a recognized national organization; (b) the development of appropriate educational outcomes by the Technician Program Directors; and, (c) appropriate financial resources being available so that the program is operated on a self sufficient basis. Since that time, CCAPP has maintained contact with the Canadian Pharmacy Technician Educators Association and the Ontario College of Pharmacists in the pursuit of this objective. In early 2006, CCAPP established an Ad Hoc Committee on Development of an Accreditation Process for Pharmacy Technician Programs in Canada. In June, 2006, the Board approved the recommendation that CCAPP undertake the accreditation of Pharmacy Technician Programs in Canada with CPTEA and other stakeholder participation in the process. The target date is June 2009 for the first accreditation to begin. A draft proposal is being circulated to stakeholder groups for comment in the fall of 2006.

### CANADIAN PHARMACY TECHNICIAN EDUCATORS ASSOCIATION

The Canadian Pharmacy Technician Educators Association (CPTEA) is the national voluntary organization of phar-

macy technician educators established to lead, advance, support, and promote excellence in pharmacy technician education. CPTEA has prepared a listing of available pharmacy technician programs in Canada (Appendix D). CPTEA holds bi-annual meetings that provide the opportunity for pharmacy technician educators from all parts of the country to exchange ideas and discuss program development. Featured sessions at both the 2002 and 2004 CPTEA meetings discussed the certification and accreditation of pharmacy technician programs with invited speakers from the CPhA, CCAPP, Ontario College of Pharmacists, Canadian Society of Hospital Pharmacists and the Accreditation Council on Pharmacy Education in the USA.

A major program for CPTEA this past year, with the support of the OCP, has been the development of a draft set of national educational outcomes for pharmacy technician programs. *Educational Outcomes for Pharmacy Technician Programs in Canada – Draft for Consultation August 2006* is attached as Appendix C. The organization is also working closely with CCAPP in seeking the establishment of an accreditation process for pharmacy technician programs that would be based on the CPTEA educational outcomes document.

### CANADIAN SOCIETY OF HOSPITAL PHARMACISTS

([www.cshp.ca](http://www.cshp.ca))

The Canadian Society of Hospital Pharmacists (CSHP) is the national voluntary organization of pharmacists committed to the advancement of patient-centered pharmacy practice in hospitals and related health care settings. CSHP represents over 2000 pharmacists in provincial branches across the country. As hospital practice pioneered the progressive utilization of pharmacy technicians, CSHP is very interested in their evolving role.

In 2001, CSHP published a position statement and an information paper supporting the role of the pharmacy technician in the provision of pharmacy services to allow pharmacists more direct patient care. The CSHP Council has struck a task force to revise its 1992 "*Guidelines for the Delegation of Functions to Pharmacy Technicians and Other Support Personnel*" and its 1994 "*Guidelines for Hospital Pharmacy Technician Training Programs*". The 1992 version

## NATIONAL LANDSCAPE CONT'D

of the “*Guidelines for the Delegation of Functions to Pharmacy Technicians and Other Support Personnel*” outlined the appropriate education and training for technicians who are taking increased responsibility, the tasks which must be performed by a pharmacist, those which may be delegated, and the requirements for a program to ensure the quality of the tasks performed by technicians. The 1994 “*Guidelines for Hospital Pharmacy Technician Training Programs*” provide broad recommendations to assist hospital pharmacists in evaluating pharmacy technician training programs and to communicate desirable training attributes to meet the needs of hospital pharmacy practice to institutions that provide such programs, whether hospital or academic. In view of the work underway by CCAPP toward the development of an accreditation process for pharmacy technician programs, CSHP may have to reassess the need to revise and publish this last document.

As noted earlier, hospital pharmacy practice tends to be much more specialized than that in community pharmacies, and the skills required of technicians are typically more variable and complex. In the most advanced hospital practices, technicians must be proficient in every area of drug distribution. The tasks associated with each technician position are defined, and technicians are often rotated through the positions on a weekly or monthly basis. The technicians may also specialize in the sterile preparation area, where they rotate through positions with specific tasks assigned to the position. Increasingly, technicians are taking on leadership and supervisory roles, responsible for continuous quality improvement as well as development of and compliance with task specific competency standards for all staff performing technical functions.

Hospitals also may use the tech-check-tech system whereby a technician will complete a technical task, and another technician who is certified to check the technician’s work in that situation, will provide the final check and release the drug from the pharmacy for use. Tech-check-tech may apply to tasks such as computer order entry and filling prescriptions, unit dose trays or ward stock carts. In the tech-check-tech system, the pharmacist is involved in screening the prescription against the patient’s medication profile to confirm that the order is safe, appropriate and optimal, and providing direct patient care. In this sense, the pharmacist provides only services requiring professional judgement and

clinical expertise throughout the medication process, while the technicians are performing the technical and distributive tasks. This distinction between responsibilities allows for a more efficient use of human resources, and therefore of time and money.

### NATIONAL ASSOCIATION OF PHARMACY REGULATORY AUTHORITIES

([www.napra.ca](http://www.napra.ca))

The National Association of Pharmacy Regulatory Authorities (NAPRA) current 2006 *Operational Plan* includes the activity of participating in consultations regarding pharmacy technician competencies, certification, and registration. NAPRA’s involvement is therefore limited at this time to engagement in discussions with other organizations on this topic, notably CCAPP, CSHP, CPhA and the individual pharmacy regulatory authorities that have their own initiatives underway.

### THE PHARMACY EXAMINING BOARD OF CANADA

([www.pebc.ca](http://www.pebc.ca))

The Pharmacy Examining Board of Canada (PEBC) is the national certification body for the pharmacy profession in Canada. PEBC functions as an arms-length national examining board and has more than 40 years of experience in assessing the qualifications and competence of candidates for licensing by pharmacy provincial regulatory authorities.

PEBC is exploring the development of a certification examination for registration of pharmacy technicians. OCP and PEBC are having ongoing discussions regarding the joint development and pilot testing of an Entry-to-Practice Certification Examination for the assessment and certification of the competence of pharmacy technicians as a qualification for registration for an expanded role. Two other provincial regulatory authorities have expressed support to PEBC for the development of a national certification examination for assessment of technicians for purposes of entry-to- practice registration as a regulated pharmacy technician.

# THE PROVINCIAL LANDSCAPE

## ALBERTA

The Alberta College of Pharmacists (ACP) is currently monitoring the Alberta Branch of the Canadian Association of Pharmacy Technicians (CAPT-AB)'s bid for self regulation and the ACP Council, at its April 2006 meeting supported the need for regulation of pharmacy technicians. ACP has submitted a draft to the Health Professions Act defining a qualified pharmacy technician as a person who has completed a pharmacy technician program approved by the Council. Through its bylaws, ACP intends to provide a register for qualified technicians. The process towards regulation of pharmacy technicians is not likely to occur prior to the provincial Health Professions Act (HPA) regulations for pharmacy coming into effect. (This Act currently includes 28 health professions responsible for writing their own regulations.) As a result, any requirements regarding pharmacy technicians will be dealt with under the standards of practice and responsibilities of proprietors, licensees, and supervising clinical pharmacists.

Pharmacist licensees will be responsible for ensuring staff members have the appropriate training, written policies, and procedures prior to implementing protocols such as the tech-check-tech. Monitoring of the system will also be required. This shift will not remove all responsibility from employee pharmacists. Rather, they will have to contribute to the development of effective systems, and help develop solutions to challenges.

The CAPT-AB has for some time been working toward the creation of a pharmacy technician regulatory body for the self-governance of pharmacy technicians in Alberta. CAPT-AB has submitted a letter and application on August 2, 2005 to the Minister of Health and Wellness for Self Governance of Pharmacy Technicians under the Health Professions Act. The process is slowed at the current time as the government is concentrating on making initial contact with the defined health professions before considering new applicants.

The membership of CAPT-AB approved their *Competencies for the Pharmacy Technician, Standards of Practice, Guideline for Standards of Practice* and the *Proposed Continuing Competency Program for the Pharmacy Technician* on September 12, 2004. ([www.capt.ca](http://www.capt.ca)).

The Pharmacy Technician Certification Board of Alberta (PTCB-AB) came into existence in 1999 as a subcommittee of the CAPT-AB. The PTCB-AB offered their first examination sitting and became their own entity in July, 2001. They offer exams, study modules, continuing education subscriptions, and certification status to pharmacy technicians that meet specific qualifications and criteria. Since they wished to offer exams to individuals who have graduated from quality educational programs, they are conducting voluntary evaluations of the pharmacy technician programs. It is the only Pharmacy Technician Certification Board in Western Canada.

Certification is a process by which eligible Pharmacy Technicians voluntarily apply to sit a Pharmacy-related, multiple choice, theory-based examination. Technicians who successfully meet the established minimum passing grades on the exam may credential themselves as provincially certified by PTCB-AB and must then maintain this status by completing annual continuing education requirements.

In September, 2006, PTCB-AB issued a press release indicating that they were becoming a national organization and would provide a national theory based examination as well as offering a practical examination to complement the written portion. It is unclear at this time that this association has obtained the legislative and other authority to become a national certification body. Other issues concern their proposed name and use of designations to indicate certification. Nor is it clear how this aligns with the work underway by the PEBC, OCP, and other provinces on the joint development and pilot testing of a national entry-to-practice certification examination for pharmacy technicians.

## BRITISH COLUMBIA

The role of the College of Pharmacists of British Columbia (CPBC) is to focus on patient safety. Pharmacists are expected to meet the *Framework of Professional Practice* standards and ensure safe and effective pharmacy practice outcomes for the people of British Columbia. Pharmacy's transition to a more patient-centered practice model will only be achieved with increased reliance on a highly trained workforce of technicians. Under the College's

auspices, 3,750 pharmacists are licensed to practice in British Columbia with the majority of pharmacists (2,500) practicing in community pharmacies.

There is no legislation that provides professional status for pharmacy technicians in British Columbia. The CPBC has established *Standards for Pharmacy Technician Verification of Non-Sterile and Sterile Products in Hospital Practice* (tech-check-tech) and has published *TechWise Hiring Smart* to assist pharmacists with:

- Hiring qualified pharmacy technicians to meet the needs of the profession;
- Assessing the qualifications and skills of pharmacy technician candidates; and
- Appropriately utilizing pharmacy technicians for non-professional duties.

The college bylaws contain statements regarding:

- Community pharmacy support persons
- Functions of hospital pharmacy support persons

There currently is a pilot “tech-check-tech” project running in an ambulatory clinic on the east side of Vancouver. The CPBC is also actively involved in a number of innovative programs using tele-pharmacy supervision of pharmacy technicians for outlying communities without access to a pharmacist.

In April 2006, the CPBP Pharmacy Technician Task Force, after reviewing the regulations in other jurisdictions, examining the state of pharmacy practice, and anticipating changes to provincial health-care legislation, recommended the following: that the CPBC regulate the practice of pharmacy technicians by establishing a new class of licensure for registered pharmacy technicians. Detailed information concerning this proposal is presented in the “*White Paper on Pharmacy Technicians – A Discussion for Council*” prepared by the Pharmacy Technician Task Force, March 2006.

In regulating pharmacy technicians, the CPBC will need to:

- Define the roles, responsibilities, and competencies for pharmacy technicians;
- Establish education and training standards for pharmacy technicians;
- Develop a credentialing system for pharmacy technicians;

- Develop a registration process and procedure;
- Develop a complaints and discipline procedure;
- Develop a quality assurance program;
- Develop a governance structure;
- Determine the regulatory framework for pharmacy technicians;
- Develop a code of ethics; and
- Work with the provincial government to bring about related legislation.

The CPBC considered the report (April 2006) and made the following recommendation with respect to the regulation of Pharmacy Technicians in British Columbia:

- A Steering Committee comprised of representatives from stakeholders will be formed to develop a business-case analysis to assist the Council of the College of Pharmacists of BC to reach a decision with respect to the regulation of pharmacy technicians by the College of Pharmacists of BC.
- The Steering Committee is to determine the costs, staffing requirements and timelines to implement the transition to a regulatory model for pharmacy technicians. In addition, the committee is to collaborate with other provincial regulatory associations in the development of standards of practice, credentialing, education, licensing.
- A communication plan is to be developed to keep all stakeholders informed on the progress of this initiative.

Phase I – Business-case analysis should be completed in 6-8 months.

## MANITOBA

In the spring of 2001, members of the Manitoba Pharmaceutical Association (MPhA) passed a motion to allow pharmacists to delegate technical duties to another person in an institutional setting. These changes have yet to be passed into legislation. It now appears the enabling legislation will be passed in 2006 with proclamation following thereafter. The legislation will define “technician” and enable those individuals to perform tasks described in the regulations. All non-pharmacist persons working the dispensary do not have to be technicians. However in order to perform and be responsible for the technician tasks that will be included in the regulations, those

## PROVINCIAL LANDSCAPE CONT'D

persons must qualify under the definition. The anticipation of the regulated tasks will include delegation of the technical and product preparation aspects of the current pharmacy practice. Of course, even with delegation, the pharmacist is still responsible for evaluating the quality of work of those performing the delegated tasks.

As the legislation and regulations in Manitoba currently stand, there is only provision for tasks that may be carried out by a person other than a licensed pharmacist. There is also a ratio of pharmacists to such persons (1:1+1 in community settings, and 1:2+1 in institutions), so that a pharmacist is not supervising too many of these people at once. The regulations do not identify that other person as “assistant” or “technician”. Also, the current regulations have no restrictions on who may call himself or herself a pharmacy technician. Notwithstanding, hospital and certain businesses have developed job descriptions for technicians and certain staff are referenced as such. In hospital settings and under a unit dose drug delivery system, additional responsibilities can be given to a technician that has received additional training and testing. The technician can become a “checker” in the preparation of the unit dose cassettes being sent to the ward. In other hospital settings, certain technicians have a greater responsibility to compound parenteral solutions and prepackage medication. As stated before, the pharmacist is still responsible for the final product and evaluating the quality of work of those performing the delegated tasks.

### NEW BRUNSWICK

The New Brunswick Pharmaceutical Society (NBPhS) continues to discuss the role of pharmacy technicians, including the options for self regulation or regulation under the NBPhS. This issue is being considered in the Society’s strategic planning process. Pharmacy technician regulation and provincial certification would require legislation change to the Pharmacy Act and such legislation is not expected prior to 2008 at the earliest. NBPhS has *Standards for Hospital Pharmacy Practice* along with a *Protocol for Pharmacy Technician Delegation* that includes certification for delegation of the final physical check for accuracy of a finished product. The hospital corporations are responsible for the certification and recertifying the pharmacy technicians within their hospitals.

There are two community college pharmacy technician programs (one French language and one English language) and four private institutions offer pharmacy technician education options. It is estimated that there are approximately 600 – 1,000 pharmacy support staff (pharmacy assistants, pharmacy technicians, etc.) within the province.

### NEWFOUNDLAND AND LABRADOR

The Newfoundland and Labrador Pharmacy Board (NLPB) has drafted guidelines for the pharmacist to follow on the role of the pharmacy technician which were updated in October, 2005. There have been recent amendments to the Pharmacy Act in November 2005 that provide enabling legislation permitting the Board to make regulations respecting the tasks in the practice of pharmacy that may be delegated by a registered pharmacist to a pharmacy student or “person within a specified class”. It also notes that regulations may be made regarding the characteristics and qualifications of the specified class of persons. Therefore, the Board now has the enabling legislation to proceed in introducing regulations respecting pharmacy technicians.

The CSHP Newfoundland and Labrador Branch supports the CSHP statement on the Role of Pharmacy Technicians. Currently there are two pharmacy technician training programs in Newfoundland.

### NOVA SCOTIA

In Nova Scotia, no formal document has been generated on roles, responsibilities, and appropriate tasks for delegation. For the most part, pharmacists are expected to use professional judgment when delegating tasks to pharmacy technicians and all tasks must be completed under the supervision of a pharmacist.

The Nova Scotia College of Pharmacists (NSCP) and the Pharmacy Association of Nova Scotia (PANS) were approached several years ago by the provincial chapter of CAPT to set up a certification program. The NSCP is of the position that it is in the interest of the pharmacy profession and the public to have well trained, competent technicians. The NSCP supports the need for a certification process for technicians and for a system that would assess

## PROVINCIAL LANDSCAPE CONT'D

pharmacy technician educational programs. However, it believes these should be done at a national level.

There have been discussions with various stakeholders regarding the regulation of pharmacy technicians but, to date, there has been little support for this initiative. Discussions have also been held with the legal profession regarding NSCP assuming regulatory responsibility for pharmacy technicians in addition to pharmacists. Their legal opinion is that it is unacceptable for one regulatory body to regulate two separate groups, especially if these groups have a hierarchical relationship, such as pharmacists and pharmacy technicians.

### ONTARIO

#### *Voluntary Certification*

In 1996, the Ontario College of Pharmacists (OCP) designed and implemented the first voluntary pharmacy technician certification program in Canada. Since that time, more than 2200 technicians have become certified. In order to implement this program, OCP developed “*Guidelines for the Pharmacist on the Role of the Pharmacy Technician*” which outlines the tasks which may be performed by a pharmacy technician according to procedures established by the pharmacist.

Pharmacy technicians working in Ontario may apply for voluntary certification by first submitting an application to have their pharmacy technician credentials evaluated. Pharmacy technicians may apply with one of the following credentials:

- Graduation from a formal program in Ontario approved by the Ministry of Training, Colleges and Universities (MTCU)
- Graduation from a formal program outside Ontario that the College finds comparable to a program approved by MTCU
- On-the-job trained as a pharmacy technician performing the functions outlined in “*Guidelines for the Pharmacist on the Role of the Pharmacy Technician*”

(Note: The MTCU has two separate branches: one which approves the community college programs that are two years long; and another that approves the private school programs that are less than eight months in duration.)

Once the credentials are approved, the technician can apply to write the certification examination. Upon successful completion of the examination, the technician achieves Certified Pharmacy Technician (CPhT) status and may use the CPhT designation, for which OCP has a nation wide trademark.

#### *Proposed Regulation of Pharmacy Technicians*

In 1998, OCP Council identified as one of its priorities the establishment of a separate class of registration for pharmacy technicians. Since then, the OCP has consulted extensively with pharmacists and pharmacy technicians regarding technician regulation, through district meetings, focus groups and through the College’s “Pharmacy Connection”. In June 2003, Council approved the *Competency Profile for Pharmacy Technicians*. In December 2004, Council approved the release of the “*Proposed Standards of Practice for Registered Pharmacy Technicians*” for consultation with stakeholders. In November 2005, OCP held a series of regional meetings throughout the province to specifically further the discussion on the regulation of pharmacy technicians. In 2005 the Minister of Health requested that the Health Professions Regulatory Advisory Committee (HPRAC) consider whether it would be appropriate to regulate pharmacy technicians under the Regulated Health Professions Act. Upon receiving the OCP submission on this issue, HPRAC convened a series of focus groups and invited comments from interested stakeholders across the province. On May 19, 2006, HPRAC recommended that pharmacy technicians be regulated under the Ontario College of Pharmacists. The Minister is seeking comments on the report with a deadline date of June 20, 2006. The Minister will consider the feedback and is expected to introduce legislative changes in the fall of 2006.

The regulated pharmacy technician would have an expanded scope of practice and responsibilities beyond what unregulated pharmacy assistants/technicians currently perform. The expanded role for regulated pharmacy technicians would directly support the current and expanded future roles of the pharmacist.

As OCP works towards the regulation of pharmacy technicians, there will be several components to develop such as accreditation standards for formal education programs, an

## PROVINCIAL LANDSCAPE CONT'D

entry to practice examination, legislative changes, bridging education and a prior learning assessment. In addition, processes for registration, complaints and discipline and quality assurance which are similar to those for pharmacists will also be developed. OCP would like to collaborate with other provincial regulatory authorities that are interested in pursuing regulation of pharmacy technicians as this could benefit labour mobility.

In Ontario, the OCP has proposed that the choice to become regulated be voluntary. It is expected that pharmacy assistants/technicians will choose whether they wish to pursue this expanded role or remain practicing within their current roles and responsibilities. Employers will also choose whether to hire regulated pharmacy technicians. There will continue to be a need for unregulated technicians. For current information on the status of this initiative to regulate pharmacy technicians, visit the OCP website: [www.ocpinfo.com](http://www.ocpinfo.com).

### PRINCE EDWARD ISLAND

The Pharmacy Act in PEI only outlines what a pharmacist must do, and has no provision for what appropriate tasks are for support personnel. The Prince Edward Island Pharmacy Board is currently considering the preparation of official guidelines for pharmacy technicians which may include the ratio to pharmacists in a dispensary. At this time, there is no recognition or certification process being considered.

In the 1990's, the Prince Edward Island Pharmacy Board (PEIPB) conducted a survey jointly with Charlottetown's Holland College, to assess the need for pharmacy technicians in practice settings. Since there was no need determined, Holland College opted not to implement a technician training program.

In the fall of 2001, CompuCollege started a technician training program in Charlottetown, which is the province's only academic pharmacy technician training program.

### QUÉBEC

Québec has an official category of *Assistant-Technique en Pharmacie*. The assistant-technique en pharmacie is

defined as a person who has obtained a diploma "d'études professionnelles (D.E.P.)" from a pharmacy assistance course. The others persons who assist the pharmacist but don't have a diploma are called "commis en pharmacie"

There is a list of technical functions, which are appropriate for delegation, included in the standards of practice (November 2005). A pharmacist may supervise a maximum of four assistant-technique en pharmacie.

In the 2001 May/April issue of *L'Ordonnance*, the journal for l'Ordre des Pharmaciens du Québec, results from a survey of their members was published addressing the issue of support for l'Ordre's intention of allowing delegation of container content verification in community settings. The majority of respondents expressed reservation of adapting such a system in community settings at that time, but the l'Ordre continues to review this regulatory situation. Procedures are in place to permit delegation of container content verification in institutional practice settings.

The assistant-technique en pharmacie course is approximately 1,200 hours at the high school level. There are six-seven schools approved by the Education Deputy Minister to provide this course. L'Association des pharmaciens des établissements de santé du Québec (APES) is in discussion with government authorities regarding the possibility of developing a more intense and comprehensive course for pharmacy technicians.

L'Association québécois des assistant(e)s-techniques en pharmacie (AQATP [www.aqatp.ca](http://www.aqatp.ca)) is a voluntary association of pharmacy assistants that was formed in 1986 and it has about 100 members throughout the various regions of Québec.

### SASKATCHEWAN

Under section 14(2)(u) of The Saskatchewan Pharmacy Act, 1996, the Council of the Saskatchewan College of Pharmacists (SCP) is authorized to make bylaws "governing delegation of functions by a member and prescribing standards, terms, and conditions of that delegation". The SCP has yet to enact such bylaws because those issues have been covered under the "Standards of Practice for Saskatchewan Pharmacists".

## PROVINCIAL LANDSCAPE CONT'D

---

When Council approved the *NAPRA Model Standards of Practice for Canadian Pharmacists*, they directed that consultations be held with members to determine implementation plans. This occurred during the 2003 and 2004 district meetings, from which the members asked that the standards be implemented in phases, beginning with technicians and documentation.

The SCP agreed, and this is important because the new standards did not cover the standards, terms and conditions to the same extent as the former standards. For example, the former standards listed the functions that could be delegated and established a 1:1 pharmacist to technician ratio. These are not specified in the NAPRA standards.

To fill that gap, they borrowed the “*Technician Evaluation and Monitoring Tool*” prepared by the College of

Pharmacists of British Columbia. A pharmacy student adapted that work, and this adaptation (SaskTech) was subsequently approved by the Professional Practice Committee and Council. The assessments in this document are being validated by the Director of the Pharmacy Technician program at the Saskatchewan Institute of Applied Science and Technology. Once validated, SCP will formally introduce this to the members.

### TERRITORIAL REGULATORY AUTHORITIES

Currently, the territorial regulatory authorities have not made changes in their regulations pertaining to pharmacy assistants but they are closely observing the proposed changes in the provinces.

# THE INTERNATIONAL LANDSCAPE

## AUSTRALIA

The Pharmacy Guild of Australia (PGA, [www.guild.org.au](http://www.guild.org.au)) is an association of pharmacy owners. They have developed a national training course for pharmacy assistants in community pharmacy. This training course is designed to comply with the Australian Qualification Framework (AQF), to deliver credentials for accreditation by state vocational education. This accredited, competency based training course has been updated to be aligned with the National Community Pharmacy Training Package that was released in 2002. The courses provide the opportunity to reach four successive grades of competency (Certificates I–IV). The training can be done either by distance education or in-centre with the Guild Branch in each State and Territory conducting the training. Information on the courses can be obtained by going to [www.guild.org.au/public/ntcpa.asp](http://www.guild.org.au/public/ntcpa.asp). The training package is also currently under review. There is at least one private training provider that also offers courses aligned with this national training package.

The Pharmaceutical Society of Australia (PSA, [www.psa.org.au](http://www.psa.org.au)) is an educational, ethical, and professional association of pharmacists in all areas of practice. The PSA endorses the use of trained dispensary assistants/ technicians, and agrees that using appropriately trained technical staff in dispensing increases professional contact time between the pharmacist and patient. (*Dispensary Assistant – pharmacy support staff that specialize in dispensary services. Under PSA guidelines, these staff are expected to have successfully completed, or be in the process of completing, an appropriate training course. Other alternative terms for the same function include Dispensary Technician and Pharmacy Technician.*)

In 2004, the PSA published a policy document “*The role of non-pharmacist dispensary assistants/technicians*” ([www.psa.org.au](http://www.psa.org.au), under *Policies and Guidelines*). Tasks may be delegated according to written procedures, but the pharmacist still remains responsible. Where no registering authority guidelines exist, a ratio of two technicians to one pharmacist should not be exceeded. It is recommended that dispensary technicians have successfully completed, or be in the process of completing an appropriate training course recognized by the registering authority of the state in which the pharmacy is located. One such course is offered by PSA

through one of its state branches in accordance with the National Community Pharmacy Training Package.

One other form of pharmacy non-professional staff is the Pharmacy Assistant (*Pharmacy Assistant – Pharmacy support staff that predominately undertake a customer service and sales role. They have not specialized in undertaking activities in the dispensary*).

The Society of Hospital Pharmacists of Australia (SHPA, [www.spha.org.au](http://www.spha.org.au)) is an organization that represents pharmacists and pharmacy technicians working in hospitals. SHPA strongly supports the introduction of national competency standards for pharmacy support staff. It considers that only individuals who have achieved or are undertaking Certificate III or IV in Health Service Assistance with appropriate work based experience, should be classified and employed as hospital pharmacy technicians. A number of providers offer these courses in both face-to-face and distance learning options. In September 2005, the organization developed a submission to the Industry Skills Council regarding the health training review project relating to the “*Hospital Pharmacy Technician Qualifications Framework*”. This document seeks to link the activities undertaken by hospital pharmacy technicians with the current and proposed qualifications framework. It documented numerous gaps in the activities currently performed by pharmacy technicians compared with the current qualifications framework and made recommendations for revisions.

In December, 2004, the Pharmacy Guild of Australia commissioned a research project into “*Workforce and Career Options for Pharmacy Assistants – Final Report*” which discusses the future roles of pharmacy support staff. This report is available on the Guild web site at [www.guild.org.au/research](http://www.guild.org.au/research) (look under “Funded Projects”).

## DENMARK

The regulations for the Danish Pharmacy Assistant Education Program were laid down by the Danish Ministry of Education in 1997 to produce a pharmacoconomist. It is a three year program consisting of an apprenticeship program at a pharmacy and theoretical training at the Danish College of Pharmacy Practice. According to law,

pharmaconomists may handle the dispensing of prescriptions, and advise on and sell drugs. Upon completion of the education, pharmaconomists are certified to:

- Provide unassisted counseling to pharmacy customers on self care (including health-related matters, prevention and self-medication) as well as on OTC and other drugs;
- Provide unassisted counseling on the use, shelf life and storage of prescribed drugs;
- Based on their understanding of good pharmacy practice, provide unaided, good customer service and counseling adjusted to the customers' needs and situations;
- Handle all phases of the dispensing of prescriptions unassisted and in accordance with current regulations;
- Apply information technology to solve various tasks;
- Contribute to the quality assurance and quality development of daily routines;
- Participate in project-oriented work tasks and development tasks;
- Plan and prioritize own work assignments unassisted.

The entry requirement to the education is a qualified high school certificate. The three-year education comprises seven courses (in total 20 weeks) of theoretical training at the Danish College of Pharmacy Practice and five days of examinations. During the apprenticeship at the pharmacy, the apprentice receives a minimum of two hours of theoretical tutorial a week. In addition, three hours a week are allocated to self-study. There is a capacity for approximately 20 students per year-class to complete a course of study incorporating apprenticeship at a hospital pharmacy. The apprenticeship will then be equally divided between a community pharmacy and a hospital pharmacy with alternating stays individually arranged with each education pharmacy.

## NEW ZEALAND

Pharmacy Technicians must either hold an approved certificate issued by the Pharmaceutical Society of New Zealand (PSNZ, [www.psnz.org.nz](http://www.psnz.org.nz)) prior to 1998, or hold, or be enrolled in a training programme leading to the achievement of, the National Certificate in Pharmacy (Technician) Level 5, a registered qualification of the New Zealand Qualifications Authority (NZQA). This qualification permits a technician to compound and dispense medicines

under the direct personal supervision of a pharmacist. A pharmacy technician holding an approved certificate prior to 1998 may not compound or dispense sterile products unless they have undertaken additional training to complete these components of the National Certificate. (Note: The NZQA assigns 10 different levels of qualifications, from 1–10, where 1 is the least complex and 10 the most. Please visit [www.nzqa.govt.nz/framework/levels.htm](http://www.nzqa.govt.nz/framework/levels.htm) for more information.)

The training to meet the competencies required can be undertaken as a full-time 1-year course with one of three New Zealand training providers: Auckland University of Technology (AUT), Bay of Plenty Polytechnic or the Academy Group (North Shore) Auckland. Alternatively, it can be undertaken on a part-time basis through The Open Polytechnic of New Zealand (TOPNZ) while working in a pharmacy.

The full-time courses include a work-placement to enable students to gain on the job experience. Those undertaking the TOPNZ programme are already employed in a pharmacy and the pharmacist acts as their mentor/verifier. Students working through the TOPNZ programme are allowed a maximum of 5 years to complete the course with two to three years being the average.

In addition the Pharmacy Industry Training Organisation (PITO, [www.psnz.org.nz/public/pito/index.aspx](http://www.psnz.org.nz/public/pito/index.aspx)) runs a Recognition of Current Competence (RCC) programme for overseas qualified pharmacy technicians. This can only be undertaken once the technician is employed in a pharmacy and leads to the National Certificate. This is an 'assessment only' programme and is generally completed in twelve to eighteen months. Depending upon the overseas qualification held, there may be enough cross-over to allow exemption from some components of the National Certificate.

PITO is also responsible for quality assurance and moderation of all the training providers offering pharmacy support staff qualifications, including the National Certificate in Pharmacy (Assistant) Level 3 for retail assistants. PITO liaises closely with providers, pharmacists, technicians, the Pharmacy Council, PSNZ, the NZ Pharmacy Guild and other relevant industry bodies to identify future skill short-

## INTERNATIONAL LANDSCAPE CONT'D

ages and provide training and qualifications to meet these needs.

### THE UNITED KINGDOM

The Royal Pharmaceutical Society of Great Britain (RPSGB, [www.rpsgb.org.uk](http://www.rpsgb.org.uk)) is the professional and regulatory body for pharmacists in England, Scotland and Wales. It also operates a voluntary register for pharmacy technicians. The primary objectives of the Society are to lead, regulate, develop and represent the profession of pharmacy.

The UK has a system of National Vocational Qualifications (NVQ), which are competency-based qualifications assessed against National Occupational Standards (NOS). To achieve an NVQ, programs of learning and workplace assessment are necessary. NVQ's have levels related to work performance roles. Within this qualification scheme, the Society has three support staff designations: *Pharmacy Technicians* fall under the NVQ Level III category, *Dispenser/Dispensing Assistant/Pharmacy Assistant/Assistant Technical Officer* who is a person involved in a range of pharmacy support activities (S/NVQ Level 2 training) and the *Medicines Counter Assistant* who works in support of the sale of non-prescription medicines, the receipt of prescriptions, the handing out of completed dispensed items and giving advice on health matters.

The dispensary assistant course trains the student in procedures and legal aspects of working in a pharmacy. The course is six months in duration, but is not recognized by RPSGB as achieving the outcomes required for minimum standards. However, after completion of this course, the credits can be transferred into the first year of the dispensing technicians NVQ, recognized by the RPSGB. The dispensing technician course is called Pharmacy Services Level 3 NVQ, and is two years duration. The knowledge required by completion of this course appears to be similar to what Canadian pharmacy technicians learn in formal technician education programs, in that the topics of physiology and pharmacology are addressed. The course also involves performance evidence collected in the workplace to show that the student's competency reaches the minimum required occupational standard, which would be similar to experiential rotations, with the exception that the student is actually employed by their practice site. All non-pharmacists

involved in dispensing medication must have completed this course by 2005.

The Liverpool John Moores University, in conjunction with the Greater Manchester Strategic Health Authority, has established a Foundation Degree in Medicines Management which provides the basic progression from level 3 NVQ. The programme is in response to the developing and changing requirements of pharmacy technicians with the new National Health Service. It aims to provide suitably qualified Pharmacy Technicians for both community and institutional environments with the necessary skills and expertise to carry out their future roles in medicines management.

The Department of Health has recently published its draft proposals for the regulation of pharmacists in Great Britain and pharmacy technicians in England and Wales. The Order in the document is the statutory regulation of pharmacy technicians in England and Wales and the title "*pharmacy technician*" will be protected by law. The Society will decide on the educational qualifications for admission to the pharmacy technician register, including transitional arrangements for people who are already technicians when the register opens. Applicants qualifying for the register will have to have the Pharmacy Services S/NVQ Level 3 and the training program leading to this certification will have to include both an accredited underpinning knowledge program and completion of work experience in a pharmacy.

Along with the above, a UK government public consultation paper on the *Pharmacists and Pharmacy Technicians Order 2006* has been launched. The document sets out proposed changes to the regulation of pharmacists throughout Great Britain and pharmacy technicians in England and Wales, which have been developed by Department of Health, the Royal Pharmaceutical Society of Great Britain (the Society) and other stakeholders ([www.dh.gov.uk/Consultations/LiveConsultations/LiveConsultationArticle/](http://www.dh.gov.uk/Consultations/LiveConsultations/LiveConsultationArticle/)).

The main provisions of the Order include a clearer statement of the Society's responsibilities to protect the public and its accountability in doing so; reform of the Society's registration process; the introduction for the first time of statutory regulation for pharmacy technicians in England and Wales; updated education and training provisions, including a statutory requirement for continuing professional development for all practicing registrants; an

## INTERNATIONAL LANDSCAPE CONT'D

increased emphasis on, and improved capacity to address, fitness to practice issues and health matters; reform of the Society's committees dealing with fitness to practice and other statutory functions; and detailed changes to various existing legislation, including the repeal of the Pharmacy Act 1954.

The Association of Pharmacy Technicians UK ([www.aptuk.org](http://www.aptuk.org)) is the professional and representative organization for pharmacy technicians working in the UK. The implications of this decision for statutory regulations of pharmacy technicians will present the Association and its members with many challenges. Officers of the Association will need to work closely with the Royal Pharmaceutical Society of Great Britain and other major stakeholders, to ensure that the interests of pharmacy technicians throughout the UK are effectively represented. With the regulatory role for pharmacy technicians being undertaken by the RPSGB, the Association must seriously consider and develop its future role as a professional and representative voice for pharmacy technicians. Initiatives such as Agenda for Change, will present the Association and all pharmacy technicians with many professional and 'non-regulatory' challenges over the next 5 years.

### THE UNITED STATES OF AMERICA

#### The Pharmacy Technician Certification Board

([www.ptcb.org](http://www.ptcb.org))

The Pharmacy Technician Certification Board (PTCB) was established in 1995 as a national voluntary certification program for pharmacy technicians. It was founded by a coalition of the American Society of Health-System Pharmacists, the American Pharmacists Association, the Illinois Council of Health-System Pharmacists and the Michigan Pharmacists Association. The National Association of Boards of Pharmacy joined the group in 2002.

The Pharmacy Technician Certification Board develops, maintains, promotes and administers a high-quality certification and recertification program for pharmacy technicians across practice settings. The PTCB administers a National Pharmacy Technician Certification Examination three times a year at more than 120 sites across the USA. A computer-based examination not anchored to specific loca-

tions is under development. The examination assesses the candidate's knowledge and skill base for activities that are most commonly performed by a pharmacy technician as determined by a national task analyses. The technician who passes the exam is designated as a Certified Pharmacy Technician (CPhT) and can renew certification every two years by participating in at least 20 hours of pharmacy related continuing education that includes at least one hour of pharmacy law. Over 250,000 pharmacy technicians have been certified since 1995. The PTCB recently completed its 2005 Update to the Practice Analysis (task analysis), the third comprehensive analysis to revalidate the description of practice.

#### American Society of Health-System Pharmacists

([www.ashp.org](http://www.ashp.org))

The American Society of Health-System Pharmacists (ASHP) has been instrumental in the establishment of both the certification of pharmacy technicians and the accreditation of pharmacy technician training programs. As early as the 1960's, ASHP has taken an interest in the role and education of support pharmacy personnel. Currently, ASHP is the only organization that accredits pharmacy technician training programs in the United States. The accreditation of pharmacy technician education programs started in 1983, and there are currently over 90 programs accredited to provide pharmacy technician education in the US. The following documents are available on the ASHP website at [www.ashp.org/technicians/](http://www.ashp.org/technicians/):

- *Model Curriculum for Pharmacy Technician Training (2<sup>nd</sup> edition)*
- *ASHP Accreditation Information and Guidelines*
- *Developing and Maintaining Up to date Training*
- *Redesigning Technician Training*
- *Technician Training Program Directory*
- *Accreditation of Chain Pharmacy Based Pharmacy Technician Training Programs*

ASHP also publishes "*Pharmacy Technician Certification Review and Practice Exam 2<sup>nd</sup> Edition*" which provides an overview of pharmacy technician practice. It is intended to assist technicians in preparing for the PTCB certification exam.

ASHP's current professional policy with respect to pharmacy technicians delineates a relationship between education &

## INTERNATIONAL LANDSCAPE CONT'D

training, certification, and the registration of pharmacy technicians by state regulatory bodies. In the US, registration merely lists an individual as a pharmacy technician. It does not, in itself, require education or examination.

ASHP's policy reads:

Policy 0412 (formed in 2004)  
UNIFORM STATE LAWS AND REGULATIONS REGARDING  
PHARMACY TECHNICIANS

To advocate that pharmacy move toward the following model with respect to technicians as the optimal approach to protecting public health and safety: (1) development and adoption of uniform state laws and regulations regarding pharmacy technicians; (2) mandatory completion of a nationally accredited standardized program of education and training as a prerequisite to pharmacy technician certification; and (3) mandatory certification by the Pharmacy Technician Certification Board (or another comparable nationally validated, psychometrically sound certification program approved by the state board of pharmacy) as a prerequisite to the state board of pharmacy granting the technician permission to engage in the full scope of responsibilities authorized by the state; further,

To advocate registration of pharmacy technicians by state boards of pharmacy; further,

To advocate, with respect to certification, as an interim measure until the optimal model is fully implemented, that individuals be required either (1) to have completed a nationally accredited standardized program of education and training or (2) to have at least one year of full-time equivalent experience as pharmacy technicians before they are eligible to become certified; further,

To advocate that licensed pharmacists be held accountable for the quality of pharmacy services provided and the actions of pharmacy technicians under their charge.

(Note: *Certification* is the process by which a nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association. *Registration* is the process of making a list or being enrolled in an existing list; registration should be used to help safeguard the public through interstate and intrastate tracking of the technician work force and preventing individuals with documented problems from serving as pharmacy technicians.)

### Pharmacy Technicians Educators Council ([www.rpxtec.org](http://www.rpxtec.org))

The first Pharmacy Technician Educators Council (PTEC) meeting was held in 1989 and they have been meeting annually with the American Association of Colleges of Pharmacy since 1995. The position statement of the organization is that all pharmacy technicians complete a formal

education and training program as a prerequisite for the pharmacy technician certification exam. The PTEC mission statement is “*To assist the profession of pharmacy in preparing high quality well-trained technical personnel through education and practical training. In addition, to promote the profession of pharmacy through professional activities and dissemination of information and knowledge to members, pharmacy organizations, and other specialists and professions.*”

The association has a recommended pharmacy technician program content and they strongly recommend that all pharmacy technician education and training programs seek the American Society of Health-System Pharmacists pharmacy technician program accreditation.

The National Association of Boards of Pharmacy (NABP) supports the development of standards for educational and training programs for PTCB-certified pharmacy technicians and pharmacy technicians, as defined in its Model Act.

As previously noted, the NABP joined the Pharmacy Technician Certification Board in 2002. Similar to the current situation in Canada, state boards of pharmacy determine the scope of practice for technicians. Over 50% require pharmacy technicians to be registered, require pharmacies to have a training manual specific to their practice setting, and maintain records of their technicians' completion of the training program. Statistics compiled by the National Association of Boards of Pharmacy indicates that more than 10 % of the states have a license and certification process. Training requirements for technicians is specified in 34 states and an examination is required in 12 states. Six states specify a maximum ratio of 4 technicians to 1 pharmacist; ten states specify 3:1 ratio and 14 states specify a 2:1 ratio.

In 2002, the Accreditation Council for Pharmacy Education agreed to initiate a profession wide dialogue concerning the possible development of national standards and an accreditation process for accreditation of pharmacy technician educational programs. [See <http://www.ashp.org/technician/TechnicianWhitePaper.pdf> for a list of the organizations that created the White Paper.] Following the receipt of comments and open hearings, the ACPE Board passed a motion in early 2004 to not proceed with this recommended development of an accreditation of pharmacy technician programs.

# CONCLUSION

---

The information presented in this paper examines and summarizes the current knowledge of issues and activities relating to the roles and responsibilities of pharmacy technicians; education, training and accreditation; and certification and regulation of pharmacy technicians.

It seems that after many years of “watchful waiting”, efforts to support the certification and regulation of pharmacy technicians, and the accreditation of pharmacy technician programs, are accelerating and coalescing. Voluntary certification is well established in Ontario and Alberta, and there appears to be support for the establishment of a national certification process. These two provinces (and potentially British Columbia as well) are also working towards the eventual regulation of pharmacy technicians, albeit under differing models.

Activities leading to the development of technician education program standards have also begun, such as the development of educational outcomes and proposed policies and procedures for the accreditation of programs, based on these outcomes.

In addition, the CPhA led “Blueprint for Action” process will drive change in many aspects of the role of the pharmacy technician. International changes to pharmacy technician education, certification and regulation will also influence the future practice of this segment of the pharmacy workforce.

This paper provides a critical piece of labour force information necessary to both pharmacy HR planning and overall HHR planning, and serves as background research and data for other pharmacy technician HR analyses that will form part of the larger Pharmacy HR Study.

# APPENDIX A

## Associations and individuals contributing to the preparation of the Environmental Scan of Pharmacy Technicians 2006

### International

Australia – Bill Kelly, Chief Executive Officer, Australian Association of Consultant Pharmacy

Denmark – Tina Schilling Hansen, Head, Dept. of Education of Pharmaconomists, Pharmakon, Hillerod

New Zealand – Bronwyn Clark, Registrar, Pharmaceutical Council of New Zealand and Jane Watson-Baker, National Manager, Pharmacy Industry Training Organisation, Wellington

United Kingdom – Dr. Peter Elliott, Liverpool John Moores University

USA – American Society of Health System Pharmacists – Dr. Henri Manasse President, and Charles E. Myers, Group Vice President

### Canada

#### *National Associations*

Canadian Pharmacists Association – Janet Cooper, Senior Director, Professional Affairs

Canadian Society of Hospital Pharmacists – Myrella Roy, Executive Director

Canadian Pharmacy Technician Educators – Rock Folkman, President and Sharron Bettes, Secretary

Canadian Association of Pharmacy Technicians – Tim Fleming, President

Canadian Association of Chain Drug Stores – Christina Bisanz, President, Allan Malek, and Heather Croisier

National Association of Pharmacy Regulatory Authorities – Ken Potvin, Executive Director

Pharmacy Examining Board of Canada – John Pugsley, Registrar-Treasurer

#### *Provincial Associations*

Alberta – Dale Cooney, Alberta College of Pharmacists and Tana Yoon, Pharmacy Technician Certification Board of Alberta

British Columbia – Alan Samuelson, College of Pharmacists of British Columbia

Manitoba – Ron Guse, Registrar, Manitoba Pharmaceutical Association

New Brunswick – Bill Veniot, Registrar, New Brunswick Pharmaceutical Society

Newfoundland and Labrador – Don Rowe, Registrar, Newfoundland and Labrador Pharmacy Board

Nova Scotia – Susan Wedlake, Registrar, Nova Scotia College of Pharmacists

Ontario – Chris Schillemore, Ontario College of Pharmacists

Prince Edward Island – Neila Auld, Registrar, Prince Edward Island Pharmacy Board

Québec – Manon Lambert, Secrétaire générale, Ordre des pharmaciens du Québec

Saskatchewan – Ray Joubert, Registrar, Saskatchewan College of Pharmacists

# APPENDIX B

## Reference and Reading List

### Canadian Pharmacists Association

- Environmental Scan of Pharmacy Technicians September 2001
- Pharmacy Human Resources Study – Presentation to F/P/T/ ACHDHR by CPhA and CACDS on behalf of Pharmacy Sector June 14, 2005
- Briefing Note Pharmacy Human Resources Study to ACHDHR June 14, 2005

### Canadian Society of Hospital Pharmacists

- 1992 “Guidelines for the Delegation of Functions to Pharmacy Technicians and Other Support Personnel”
- 1994 “Guidelines for Hospital Pharmacy Technician Training Programs”.

### Canadian Association of Pharmacy Technicians

- CAPT Comments on CPhA Response to Romanow Commission, Nov. 6, 2001

### Canadian Association of Chain Drug Stores

- CACDS Stats Pharmacy Technician Report

### Canadian Association of Pharmacy Technicians – Alberta Chapter

- Competencies for the Pharmacy Technician
- Standards of Practice, Guideline for Standards of Practice and the Proposed Continuing Competency Program for the Pharmacy Technician, September 12, 2004 ([www.capt.ca](http://www.capt.ca)).

### College of Pharmacists of British Columbia

- Standards for Pharmacy Technician Verification of Non-Sterile and Sterile Products in Hospital Practice (tech-check-tech)
- TechWise Hiring Smart
- “White Paper on Pharmacy Technicians – A Discussion for Council” prepared by the Pharmacy Technician Task Force, March 2006.

### Ontario College of Pharmacists

- Guidelines for the Pharmacist on the Role of the Pharmacy Technician
- Proposed Standards of Practice for Registered Pharmacy Technicians

### Ontario Government

- Report Recommending that Pharmacy Technicians be Regulated Health Care Professionals (<http://www.hprac.org/english/default.asp>)
- Regulation of Health Professions in Ontario: New Directions (<http://www.hprac.org/downloads/newdirections/english.pdf>)

### Ordre des pharmaciens du Québec

- Règlement déterminant les actes visés à l'article 17 de la Loi sur la pharmacie pouvant être exécutés par des classes de personnes autres que des pharmaciens March 29, 2006
- Actes visés a la l'article 17 de la loi sur la pharmacie pouvant etre délégués a des classes de personnes autres que des pharmaciens (révision aout 2005)

### Australia

#### *The Pharmacy Guild of Australia* ([www.guild.org.au/research](http://www.guild.org.au/research))

- Workforce and Career Options for Pharmacy Assistants – Final Report

#### *The Pharmaceutical Society of Australia* ([www.psa.org.au](http://www.psa.org.au))

- The role of non-pharmacist dispensary assistants/technicians

#### *Society of Hospital Pharmacists of Australia*

- Hospital Pharmacy Technician Qualifications Framework

### Denmark

#### *The Danish College of Pharmacy Practice (Pharmakon)*

- The Education of Danish Pharmaconomists

## APPENDIX B CONT'D

---

### Reference and Reading List

#### United Kingdom

- Pharmacists and Pharmacy Technician Order 2006: A Paper for Consultation ([www.dh.gov.uk/Consultations/Live Consultations/Live Consultation Article/](http://www.dh.gov.uk/Consultations/Live%20Consultations/Live%20Consultation%20Article/))
- The Pharmaceutical Journal 2006; 276 (7394) Insert “Section 60 Order – What’s It All About?” April 1, 2006)
- Force Factfile: Foundation Degree in Medicines Management Liverpool John Moores University

*The Accreditation Council for Pharmacy Education*  
([www.acpe-accredit.org](http://www.acpe-accredit.org))

- 2002 White Paper on Pharmacy Technicians

*National Association of Boards of Pharmacy*

- 2006 National Association of Boards of Pharmacy Survey of Pharmacy Law

#### United States of America

- American Society of Health-System Pharmacists ([www.ashp.org](http://www.ashp.org))
- Model Curriculum for Pharmacy Technician Training (2nd edition)
- ASHP Accreditation Information and Guidelines
- Developing and Maintaining Up to date Training
- Redesigning Technician Training
- Technician Training Program Directory
- Accreditation of Chain Pharmacy Based Pharmacy Technician Training Programs
- The ASHP also publishes “Pharmacy Technician Certification Review and Practice Exam 2nd Edition”
- Credentialing in Pharmacy, Council on Credentialing in Pharmacy December 2004

# APPENDIX C

## Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

### Introduction

Pharmacy Technicians are and have been an integral part of the pharmacy team for over thirty years. They have joined the pharmacy team, through on-the-job informal training programs, through their employer's structured educational programs, and through post-secondary educational programs. As a result, pharmacy technician education and training is the result of diverse educational outcomes, delivery strategies, and evaluation methods. While this diversity can meet the local context, it creates a broad spectrum of program requirements and learning results. National educational outcomes that frame the essential learning required by graduates upon entry to practice, wherever they have been educated/trained, provide consistency both inter- and intra-provincial jurisdictions. This draft educational outcomes' document offers a framework of the requirements needed by Pharmacy Technicians to graduate from entry-to-practice programs but may be useful for individuals already in practice to identify their ongoing learning needs. They are a step in the growth of this evolving profession.

Program outcomes that have been created to reflect a national perspective can become the benchmark for national program approval or program accreditation for Pharmacy Technician programs. Program approval or program accreditation is a descriptive assessment process that reviews programs against a standard set of educational outcomes and can outline benchmark descriptors for delivery and for evaluative strategies, program sustainability and renewal, faculty credentials, and educational resources required. A systematic process for program approval/program accreditation is desirable for education/training programs. It is an external determination that the program meets, requires improvement to meet, or cannot meet the outcomes and related approval/accreditation requirements. With a clearly structured, identifiable, transparent approval/accreditation process and reporting system, prospective students, regulators, employers, and professional associations would be able to access the information about the results of the program approval/accreditation process.

### Eight Assumptions about the Abilities of Graduates of Accredited Pharmacy Technician Programs \*

#### *Planning, Implementing, and Evaluating Abilities*

Graduates:

1. Perform safely and competently the technical and distributive aspects of preparing and releasing pharmaceutical products as permitted by legislation, professional standards, practice guidelines and expectations, and applicable policies and procedures.
2. Exercise professional judgement related to the technical and distributive aspects of receiving prescriptions and preparing pharmaceutical products for release.
3. Recognize those practice situations in which decisions and actions must involve the pharmacist; those decisions and actions in which consultation with the pharmacist or, where appropriate, with other pharmacy technicians should occur; and, those that can be undertaken independently. Pharmacy Technicians exercise critical-thinking and decision-making skills and judgement to differentiate among these three practice situations.

#### *Knowledge and Thinking Abilities*

Graduates:

4. Use critical-thinking, problem-solving, and decision-making skills appropriate to the pharmacy technician role. Critical thinking is the foundation for making safe and patient care-focused decisions. This process integrates theory, practice, and experience; results in thoughtful observations and assessments; recognizes similarities, differences, and changes in context and situations; and, brings these together into a whole. Problem solving is a process that combines critical-thinking and decision-making skills to gather information, consider the import of that information, determine relevant actions, carry out these actions, and evaluate results within a framework of informed knowledge, skills, and attitudes. Decision-making, as practised by Pharmacy Technicians, involves the ability to question effectively, to seek out guidance and information, to incorporate information, and to select those options that result in safe and competent technician practice.

Pharmacy Technicians use these skills consistent with their level of education, training, experience, and parameters of their practice.

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

#### *Interpersonal and Communication Abilities*

Graduates:

5. Communicate with groups and individuals (patients or their agents, pharmacists, pharmacy technicians, pharmacy team members, and other healthcare providers) to support optimal patient care and to promote health. They initiate and respond to written, oral, and non-verbal communication using the appropriate and effective strategies. Before communicating, Pharmacy Technicians consider the specific needs of their audience and the parameters of the technician role.

#### *Values and Ethical Principles*

Graduates:

6. Honour personal values and use ethical principles in professional and social contexts and in their decision making. Their behaviour respects the diversity of patients, patients' agents, and of the healthcare team. They are responsible and accountable for their actions.

#### *Self-Directed Learning Abilities*

Graduates:

7. Commit to lifelong learning, that is, to identify needs, implement plans, and evaluate their learning activities and opportunities. They reflect on and in their practice using self-assessment, feedback from others, and learning resources such as those found in evidence-based practice. Graduates engage in professional, personal, and in their workplace quality assurance activities.

#### *Professional Identity and Being An Informed Citizen*

Graduates:

8. Act within the parameters of the Pharmacy Technician role as outlined by relevant legislation, and where established, the professional standards and practice expectations, and the applicable policies and procedures of the practice setting. They promote patient health and well being by being informed, active, and responsible members of their profession and of the general citizenry.

\* These abilities of pharmacy graduates have been adapted from the General Outcomes of a University Graduate and Educated Citizen and Necessary for the Fulfillment

of the Professional Outcomes Required for Pharmacy Graduates.

#### *The process used to develop the educational outcomes*

In January 2006, an ad hoc working group for the development of learning outcomes for pharmacy technicians began working on draft educational outcomes document. This group was comprised of two pharmacy technician educators, two representatives of a regulatory body (Ontario College of Pharmacists), and a member familiar with the accreditation for pharmacist education programs. The working group proposed that the development process have three general steps: creation of a draft educational outcomes document for consultation, consultation with key stakeholder groups and individuals about the draft educational outcomes, and following refinement of the draft educational outcomes' document, finalization of the educational outcomes. To create this educational outcomes' document, the working group drafted eight assumptions about the required abilities that graduates from an accredited Pharmacy Technician program should demonstrate. These assumptions reflected their beliefs about the abilities required for evolving pharmacy technician practice. Using these assumptions, the working group summarized, as seven learning outcomes, the essential knowledge, skills, and attitudes required for entry into pharmacy technician practice.

The seven outcomes form a basis for educational program and curriculum development, program and curriculum renewal, and can be used for a national program approval/accreditation process. They consolidate the essential characteristics that graduates from pharmacy technician programs will need at entry into practice. They recognize that graduates must be able to work in diverse pharmacy practice settings (community, hospital, long-term care, and related fields such as insurance, computer software, and pharmaceutical companies). They are flexible, yet comprehensive, enabling graduates to move to Canadian jurisdictions other than the one in which they were educated. The working group incorporated into the seven outcomes, outcomes and concepts from three documents: Competencies for the Pharmacy Technician, (Canadian Association of Pharmacy Technicians of Alberta, CAPT-AB, 2004), the Pharmacy Technician Program Standard (Ministry of Training, Colleges and Universities, Ontario 1998); and the Pharmacy Technician Competency Profile (Ontario College of Pharmacists, 2003).

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

Discussions about and iterations of the eight assumptions and the seven outcomes were done using two teleconferences and multiple electronic consultations. A first draft of the educational outcomes was prepared for the Canadian Pharmacy Technician Educators Association (CPTEA) affiliation group. This affiliation group is open to educators from across Canada. In May 2006, the working group used electronic means to consult the executive committee of CPTEA about the draft educational outcomes.

Following this contact with the executive committee, the working group shared a draft with the general membership of the Canadian Pharmacy Technicians Educators Association (CPTEA) during their bi-annual general meeting in June 2-4, 2006. The members of the CPTEA conference revised and unanimously endorsed the draft outcomes during this meeting and a consultation of the document with key stakeholders.

This revised draft is offered for consultation to the wider community including stakeholder groups such as the Canadian Society for Hospital Pharmacists, the Canadian Pharmacists Association, and Canadian Association of Pharmacy Technician.

#### *Framework of the educational outcomes document*

The educational outcome document is comprised of seven broad outcome statements. Graduates must meet the seven outcomes. These outcomes reflect the essential learning required for effective, safe, and competent performance by entry-level pharmacy technicians. Each outcome is a broad statement of role performance that synthesizes the knowledge, skills, and attitudes underlying successful performance.

With each outcome, there are descriptors, i.e., items or elements of performance. These elements of performance describe the outcome's required knowledge, skills, and attitudes. They provide a framework for the essential learning that graduates must accomplish; however, while comprehensive, the elements of performance are not an exhaustive list. Graduates demonstrate the overall elements of performance so that they are able to work in diverse practice settings or jurisdictions; however, there are elements that may not be required in all practice settings or jurisdictions. The more specific elements of performance identify the knowledge, skills, and attitudes required by graduates where the legislation, regulations, standards, policies, and procedures permit (an asterisk identifies these descriptors/elements of performance).

#### *The outcomes document:*

1. Reflects the key concepts about the essential learning, upon which Canadian pharmacy technician educational programs will be based. The learning outcomes incorporated in this document reflect the broad-based and minimal knowledge, skills, and values required at the point of the pharmacy technician's entry into practice in the community, hospital, long-term care, and other pharmacy sectors and sets the foundation for professional growth through lifelong learning. Programs must meet but may exceed these outcomes.
2. Creates benchmarks, which when applied as the basis of program approval/program accreditation, will enable by an external agency or body to assess programs for consistency of curricula, delivery, and evaluation of the learning outcomes.
3. Respects provincial differences in pharmacy technician practice.
4. Integrates knowledge, skills, and attitudes found in professional competency profiles and in Ontario's Ministry of Training, Colleges and Universities program standard's vocational learning outcomes.
5. States the essential learning as an outcome of learning, that is, graduates have had the opportunity to gain the essential knowledge, skills, and attitudes and have reliably demonstrated their learning through a variety of evaluative strategies. They demonstrate the learning needed for the current professional role and frame the knowledge, skills, attitudes, which where supported by legislation and related standards of practice and professional guidelines, permit expanded practice.
6. Provides outcome descriptors, i.e., elements of performance, which are required learning; however, where the legislation does not permit performance in the broader scope of practice, this document recognizes that students require the knowledge but may have the opportunity to practice only within the educational setting. In the document, an asterisk (\*) identifies these outcome descriptors, elements of performance. It is proposed that programs should provide learners with the opportunities to develop the appropriate knowledge and values to support the outcomes and their elements and, where the legislation, regulations, standards, policies, and procedures permit, to practise. Graduates would meet the outcomes and their descriptors, i.e., elements of performance, but their programs may choose to include more descriptors to meet local context and demand.

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

7. Incorporates the essential performance components for situations that require pharmacist intervention, those in which technicians can work independently, and those in which technicians perform interdependent actions with pharmacists, other pharmacy technicians, and health-care teams members.

#### Summary of the Educational Outcomes for Pharmacy Technician Programs

- 1.0 Assume professional, legal, and ethical responsibilities.
- 2.0 Communicate with patients, patients' agents, and healthcare providers.
- 3.0 Collaborate with the pharmacist and members of the healthcare team.
- 4.0 Process prescriptions in compliance with legislation and established policies and procedures.
- 5.0 Prepare, in compliance with legislation and established policies and procedures, pharmaceutical products for release to patients or their agents.
- 6.0 Perform drug distribution.
- 7.0 Assume management, administrative, and quality assurance responsibilities to ensure that patients receive quality pharmaceutical products.

#### Summary and Brief Description of the Educational Outcomes for Pharmacy Technician Programs

*Graduates of pharmacy technician programs will have reliably demonstrated the ability to:*

- 1.0 ASSUME PROFESSIONAL, LEGAL, AND ETHICAL RESPONSIBILITIES.  
  
Description: Pharmacy technicians shall comply with legal requirements; practice within ethical guidelines; and, demonstrate professional integrity.
- 2.0 COMMUNICATE WITH PATIENTS, PATIENTS' AGENTS, AND HEALTHCARE PROVIDERS.  
  
Description: Pharmacy technicians communicate with groups and individuals to support optimal client care and to promote health. Communication can be with the patients or their agents, pharmacists, and other healthcare providers.

- 3.0 COLLABORATE WITH THE PHARMACIST AND MEMBERS OF THE HEALTHCARE TEAM.

Description Pharmacy technicians, as members of the pharmacy and healthcare teams, collaborate in the preparation and release of pharmaceutical products. Their work supports pharmaceutical care and inter-professional relations.

- 4.0 PROCESS PRESCRIPTIONS IN COMPLIANCE WITH LEGISLATION AND ESTABLISHED POLICIES AND PROCEDURES.

Description: Pharmacy technicians, acting within legislation and established policies and procedures, support safe and effective patient care by receiving prescriptions and entering and storing information that can be easily accessed, retrieved, and provided to the appropriate healthcare provider.

- 5.0 PREPARE, IN COMPLIANCE WITH LEGISLATION AND ESTABLISHED POLICIES AND PROCEDURES, PHARMACEUTICAL PRODUCTS FOR RELEASE TO PATIENTS OR THEIR AGENTS.

Description: Pharmacy technicians, acting within legislation and established policies and procedures, use their knowledge and skills to obtain products, calculate, measure, and prepare sterile and non-sterile products for release to patients.

- 6.0 PERFORM DRUG DISTRIBUTION.

Description: Pharmacy technicians contribute to drug distribution by performing the functions of acquisition and preparation of drugs in a manner that ensures the safety, accuracy, and quality of supplied products. They demonstrate the technical skills that are within pharmacy technician practice, including the use of computers and other technological tools. They use the business principles, policies, and procedures of their practice settings to support the preparation and release of quality pharmaceutical products.

- 7.0 ASSUME MANAGEMENT, ADMINISTRATIVE, AND QUALITY ASSURANCE RESPONSIBILITIES TO ENSURE THAT PATIENTS RECEIVE QUALITY PHARMACEUTICAL PRODUCTS.

Description: Pharmacy technicians have a significant role in the efficient and effective operation of a pharmacy. Their role includes knowledgeable use of electronic, technical, and technological means to enter, access and retrieve information, do reimbursement,

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

billing, co-payment, and report writing. They contribute to the working environment, quality assurance, and quality improvement processes of the pharmacy.

#### Educational Learning Outcomes for Pharmacy Technician Programs

- 1.0 ASSUME PROFESSIONAL, LEGAL, AND ETHICAL RESPONSIBILITIES.
  - 1.1 Be accountable for personal performance of the pharmacy technician role.
  - 1.2 Appreciate the role that performance appraisal, evaluation, and constructive criticism have in promoting professional competence.
  - 1.3 Take responsibility for self-evaluation and professional development.
  - 1.4 Comply with legislation, professional standards, and ethical guidelines,
  - 1.5 Follow established workplace policies and procedures.
  - 1.6 Refer therapeutic issues and questions to the pharmacist.
  - 1.7 Use critical thinking and problem-solving skills.
  - 1.8 Use current, relevant, and scientifically sound resources.
  - 1.9 Act as an advocate for patients.
  - 1.10 Protect patient rights to quality care, dignity, privacy, confidentiality, and to make their own decisions.
  - 1.11 Maintain confidentiality of all corporate and workplace information.
  - 1.12 Promote understanding of the pharmacy technician role and its relationship to the roles of other health-care providers.
  - 1.13 Promote patients' health and wellness in collaboration with other members of the pharmacy team
  - 1.14 Appreciate the role that professional associations can have in promoting the professional role of pharmacy technicians.
- 2.0 COMMUNICATE WITH PATIENTS, PATIENTS' AGENTS, AND HEALTHCARE PROVIDERS.
  - 2.1 Respond accurately to patients' questions within the pharmacy technician role.
  - 2.2 Direct to the pharmacist patients', patients' agents, and other health-care providers' questions that are outside the pharmacy technician role.
  - 2.3 Demonstrate knowledge of appropriate and effective communication skills:
    - 2.3.1 Recognize facilitators of and challenges to communication.
    - 2.3.2 Use appropriate communication techniques.
    - 2.3.3 Use oral and written language and communication style appropriate to purpose, setting, and situation.
    - 2.3.4 Read, write, and speak fluently in order to correctly process pharmaceutical orders.
    - 2.3.5 Use assertiveness and conflict management skills effectively.
    - 2.3.6 Use interpersonal skills when interacting with patients, patients' agents, and healthcare providers.
    - 2.3.7 Give and receive constructive criticism.
    - 2.3.8 Respect confidentiality of all communication.
  - 2.4 Use established communication policies, procedures, or protocols within the pharmacy and when interacting with the patients, the patients' agents, and healthcare providers.
  - 2.5 Use information and electronic technology.
  - 2.6 Complete accurate, legible records and documentation that meet standards, policies, and procedures.
  - 2.7 Follow standards, policies, and procedures related to the maintenance, security, and disposal of records.
  - 2.8 Prepare letters and memoranda as required.

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

- 3.0 COLLABORATE WITH THE PHARMACIST AND MEMBERS OF THE HEALTHCARE TEAM.
  - 3.1 Participate effectively as a professional healthcare team member.
  - 3.2 Establish and maintain positive working relationships.
  - 3.3 Confirm that patients or patients' agents have received/have been offered counselling by the pharmacist.
  - 3.4 Bring to the pharmacist's attention any alerts or therapeutic issues, changes and/or compliance issues.
  - 3.5 Recognize patients'/patients' agents need for dialogue and inform the pharmacist before the pharmaceutical product is released.
  - 3.6 Collaborate with the pharmacist in the release of the pharmaceutical product to the correct patients or patients' agents.
- 4.0 PROCESS PRESCRIPTIONS IN COMPLIANCE WITH LEGISLATION AND ESTABLISHED POLICIES AND PROCEDURES.
  - 4.1 Receive a new or repeat prescription from patients, patients' agents, or appropriate healthcare providers.
  - 4.2 Prioritize and organize prescriptions as they are received.
  - 4.3 Check for authenticity of prescriptions received. \*
    - 4.3.1 Determine whether prescriptions meet all legal requirements, and where they do not, notify the pharmacist, and follow up using applicable policies, effective communication, and discretion.
    - 4.3.2 Use healthcare provider lists, where available, to determine current status of prescriber's privileges.
  - 4.4 Verify accuracy and completeness of demographic and prescription data. \*
    - 4.4.1 Review prescriptions for clarity of abbreviations, medical terminology, drug names, dosage forms, strengths, quantity, directions, prescriber, date, patient demographics, third party insurance/information availability, schedule, legislation, route, and related information.
    - 4.4.2 Recognize common trade or generic names, dosage forms, doses, quantities, and directions for use of commonly used prescription drugs.
    - 4.4.3 Recognize the names, classifications, and uses of commonly used non-prescription drugs.
- 4.5 Notify the pharmacist:
  - 4.5.1 If prescriptions do not meet legal requirements
  - 4.5.2 When there are changes in the drug, dosage, quantity, dosage form, directions, the patient profile or health record, and where provided, the diagnosis or medical condition.
  - 4.5.3 Regarding known allergies, therapeutic considerations, and/or discrepancies.
- 4.6 Refer therapeutic questions to the pharmacist.
- 4.7 Read, understand, and use pharmaceutical, medical, laboratory, metric, and apothecary terms, abbreviations, and symbols.
- 4.8 Apply knowledge of pharmacology, therapeutics, anatomy, physiology, and common medical conditions.
- 4.9 Correlate trade and generic names of major drug classifications and medications with their common reasons for use, adverse effects, drug interactions, and drug dosage forms, strengths, and routes.
- 4.10 Gather information to create and maintain the patient profile or health record.
  - 4.10.1 Collect and/or update patients' demographics, current health histories, allergies, use of non-prescription products, and third party information.
  - 4.10.2 Differentiate when there are changes in the drug and dosage, the patient profile or health record, and where provided, the diagnosis or medical condition; and notify the pharmacist.
  - 4.10.3 Update demographic and prescription data.
  - 4.10.4 Use paper-based, electronic, and other resources to locate and select information.
  - 4.10.5 Confirm demographic, third party, and prescription data entered into the record and

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

- compare data against information received before processing the prescription.
- 4.10.6 Identify the relevance, applicability, accuracy, reliability, and validity of information received or retrieved.
- 4.11 Apply drug schedules, legislation, and categories including prescription, non-prescription, restricted access, and natural products.
- 4.12 Inform patients about the third-party plan coverage and payment requirements for prescription and for non-prescription products not designated as benefits.
- 4.13 Implement workplace pricing policies and pricing constraints.
- 4.14 Transfer/copy a prescription, in compliance with relevant legislation and established policies and procedures. \*
- 4.15 Transfer a prescription to another pharmacy. \*
- 4.15.1 Confirm that patients or patients' agents have approved/requested the transfer.
- 4.15.2 Ensure accuracy and completeness of prescriptions before transferring the prescriptions.
- 4.15.3 Complete required documentation.
- 4.16 Receive a transfer or copy of prescriptions from another pharmacy. \*
- 4.16.1 Receive/transcribe the prescriptions, gather information, verify accuracy and completeness of the demographic and prescription data, and check for authenticity.
- 4.16.2 Complete required documentation.
- 4.17 Provide a copy of prescriptions to patients and authorized recipients such as patients' agents, healthcare.
- 4.17.1 Ensure accuracy and completeness of the demographic and prescription data.
- 4.17.2 Complete required documentation.
- (\*) This outcome descriptor, element of performance, indicates the requirement that learners have the appropriate knowledge and where the legislation, regulations, standards, policies, and procedures permit, have demonstrated performance.
- 5.0 PREPARE, IN COMPLIANCE WITH LEGISLATION AND ESTABLISHED POLICIES AND PROCEDURES, PHARMACEUTICAL PRODUCTS FOR RELEASE TO PATIENTS OR THEIR AGENTS.
- 5.1 Ensure a clean and accessible work area; follow infection control procedures; exercise caution related to workplace hazards; and safely perform high-risk activities.
- 5.2 Use systems of measurement common to pharmacy practice.
- 5.3 Apply knowledge of drug calculations to calculate, convert, and document the results of dosage calculations and extemporaneous weights and volumes.
- 5.4 Solve pharmaceutical calculations that require common and decimal fraction conversion, manipulation of ratios and proportions, and percentages.
- 5.5 Calculate the amount of drug product needed for the prescription including drug doses based upon body weight, body surface area, and patient age.
- 5.6 Verify dosage calculations, weights and volumes, and where necessary, confirm these with a member of the pharmacy team who is regulated and document the results.
- 5.7 Identify interchangeable drugs appropriately when obtaining pharmaceutical products needed for patients.
- 5.8 Obtain the pharmaceutical product/compound that meets the requirements of the prescription.
- 5.9 Apply knowledge of drug solubility, stability, incompatibility, contamination, and product handling.
- 5.10 Follow approved formulation instructions.
- 5.11 Count, measure, or weigh the pharmaceutical product or products.
- 5.12 Verify accuracy and appropriateness of ingredients and quantities including weights and volumes; and, document.
- 5.13 Comply with legislative requirements and established policies and procedures related to:
- Handling of narcotic and controlled substances.
  - Preparing sterile pharmaceutical products.
  - Preventing and transmitting disease.
- 5.14 Select clean or aseptic technique, whichever is appropriate to the task, and comply with the rele-

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

vant principles, standards, and established policies and procedures.

- 5.15 Prepare/compound for release pharmaceutical products including extemporaneous compounds, sterile products, intravenous (IV) admixture, parenteral nutrition, and chemotherapy.
- 5.16 Select and operate equipment, appropriate to the task, including equipment used to prepare sterile products, and maintain this equipment.
- 5.17 Prepare a non-sterile compound, a pre-packaged pharmaceutical product, or a reconstituted pharmaceutical product.
- 5.18 Clean or dispose of, in a safe, timely manner, and by following established policies and procedures, any equipment, instruments, unused products, and/or by-products used to prepare pharmaceutical products.
- 5.19 Select the appropriate container for the pharmaceutical product.
- 5.20 Affix the appropriate label(s) to the pharmaceutical product or container.
- 5.21 Provide appropriate patient information materials, where specified by the pharmacist.
- 5.22 Check the accuracy and completeness of pharmaceutical products prepared for release including those prepared through technicians-checking-technicians (TCT) procedures. \*
- 5.22.1 Confirm that a pharmacist/pharmacy intern and/or a pharmacy technician who is regulated has checked and signed off on pharmaceutical products.

#### 1 Explanation

To support public safety:

a) Pharmacy technicians who are regulated shall be permitted to check pharmaceutical products prepared by another registered pharmacy technician and by unregistered pharmacy personnel. \*

b) Pharmacy technicians who are regulated and who have prepared pharmaceutical products, shall have these checked by a registered pharmacist/pharmacy intern or another registered pharmacy technician. \*

These steps ensure that pharmaceutical prod-

ucts have been checked twice, at minimum, during the preparation phase of the process and before release to patients or their agents.

- 5.22.2 Identify whether the pharmacist has had the opportunity to review the prescription and the patient profile or health record, before pharmaceutical products are released.
- 5.22.3 Confirm that all appropriate regulated personnel have checked and signed off pharmaceutical products before releasing them to patients or patients' agents.
- 5.22.4 Confirm that the correct patients or patients' agents receive the correct pharmaceutical products before releasing the products.

(\* ) This outcome descriptor, element of performance, indicates the requirement that learners have the appropriate knowledge and where the legislation, regulations, standards, policies, and procedures permit, have demonstrated performance.

#### 6.0 PERFORM DRUG DISTRIBUTION

- 6.1 Carry out distributive functions in a manner that ensures medication safety.
- 6.2 Comply with site-specific drug-distribution policies and procedures.
- 6.3 Describe distribution systems such as individual patient prescription, unit dose, compliance dose, and how these systems are used in different practice settings.
- 6.4 Describe automated dispensing machines, unit dose packaging equipment, infusion devices, and compounding devices.
- 6.5 Maintain and efficiently manage the drug distribution system in place.
- 6.6 Deliver pharmaceutical products to the correct person or designated location.
- 6.7 Document drug distribution activities.
- 6.8 Manage inventory.
  - 6.8.1 Apply knowledge of inventory management (sales/usage, rate of sale/usage, turnover, days of inventory, average inventory).
  - 6.8.2 Order drugs and supplies and maintain appropriate inventory levels (minimum,

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

- maximum, order point, and order quantity).
- 6.8.3 Follow policies and procedures for purchasing and receiving.
- 6.8.4 Receive, verify, and reconcile pharmacy orders.
- 6.8.5 Follow procedures for the proper storage, handling, distribution, removal, and disposal of expired and unusable drugs.
- 6.8.6 Package or repackage and label bulk drugs correctly.
- 6.8.7 Rotate inventory, restock, and monitor expiry dates.
- 6.8.8 Maintain computerized inventory control systems.
- 6.8.9 Follow appropriate legislation and established policies and procedures to purchase, receive, store, and release narcotics and controlled drugs.
- 6.9 Use diagnostic and monitoring devices.
- 6.10 Apply basic product display skills.
- 7.0 ASSUME MANAGEMENT, ADMINISTRATIVE, AND QUALITY ASSURANCE RESPONSIBILITIES TO ENSURE THAT PATIENTS RECEIVE QUALITY PHARMACEUTICAL PRODUCTS.
- 7.1 Use time management skills to prioritize workload demands, to establish and work within realistic time, and to evaluate and modify work patterns.
- 7.2 Work with pharmacy management to identify workflow, staffing requirements, and schedule personnel; to determine and coordinate tasks; to prioritize and organize pharmacy services; and to develop operational policies.
- 7.3 Comply with health and safety legislation and related workplace policies and procedures.
- 7.4 Select technology appropriate to the task and use correctly.
- 7.5 Follow guidelines for safe and correct use of automated distribution devices.
- 7.6 Apply knowledge of formularies, benefit lists, generic substitutions, the role of co-payments and deductible limits, and prescription quantity limitations.
- 7.7 Handle cash and other methods of payments.
- 7.8 Perform paper-based billing.
- 7.9 Be familiar with on-line adjudication of claims, pricing, billing systems, reports, claims, and drug interaction systems.
- 7.10 Process third party reimbursement claims and other billing records in a timely manner.
- 7.11 Explain to patients third-party plan coverage and payment requirements for prescription and for non-prescription products, not identified as benefits.
- 7.12 Apply basic knowledge of pharmacy software operation.
- 7.13 Demonstrate data management skills to enter, update, access, retrieve, and store electronic and/or paper-based entries and records.
- 7.14 Prepare invoices and reports as required.
- 7.15 Perform quality control/assurance procedures.
- 7.16 Perform appropriate audits on automated dispensing cabinet replenishment, packaging/repackaging of pharmaceutical products, bulk compounding products, and medication storage areas outside the dispensary.
- 7.17 Carry out routine equipment maintenance tasks and minor mechanical breakdowns.
- 7.18 Participate in the development, implementation, and evaluation of quality indicators.
- 7.19 Collaborate with other healthcare professionals in reducing and preventing medication errors and discrepancies.
- 7.20 Follow federal and provincial legislation and established standards, policies, and procedures related to the requirements for:
  - 7.20.1 Labelling.
  - 7.20.2 Prescriptions and record keeping.
  - 7.20.3 Health and safety including the handling of hazardous products and the disposing of waste.
  - 7.20.4 Maintaining, keeping secure, and disposing of records.
- 7.21 Identify opportunities for increased effectiveness and efficiency of pharmacy services.

## APPENDIX C CONT'D

### Educational Outcomes for Pharmacy Technician Programs in Canada Draft for Consultation, August, 2006

#### GLOSSARY

##### Health History

Current, relevant information about patients including their general health and any disease conditions that are currently being experienced, and those that are chronic or episodic in nature. These histories include information about current medications, both prescription and non-prescription. Patients' health histories include general demographic information such as age and gender.

##### Legislation

All current law that is relevant to pharmaceutical care and pharmacy practice.

##### Pharmaceutical Product

Any drug product purchased commercially from a pharmaceutical company or prepared in a pharmacy.

##### Pharmacy Technician

Healthcare providers who are graduates of accredited educational pharmacy technician programs, who have completed requirements for entry-to-practice, and who may be regulated by their provincial jurisdiction(s). Pharmacy technicians are an integral part of the healthcare team and collaborate with that team to receive, process prescriptions and to prepare and release medications in a safe and competent manner. In some jurisdictions, pharmacy technician is a professional title protected by legislation.

##### Prescription Authenticity

A regulated professional, acting within the limitations established by legislation, must issue prescriptions. Authentic prescriptions contain the prescriber's correct name and identifying information including professional designation and address and will have accurate and complete information about the drug and/or pharmaceutical products that are needed by patients.

##### Therapeutic Questions

Those questions or requests for clarification presented by patients, patients' agents, or health care providers that reflect therapeutic, prescription, health, and well-being-related issues that go beyond the basic knowledge and/or technical and/or distributive functions that are related to the pharmacy technician role. These questions and the need to refer them to pharmacists can be defined by legislation, or, where appropriate by policies and procedures established by the workplace.

# APPENDIX D

## Pharmacy Technician Programs in Canada

### Alberta

Grande Prairie Regional College (Grande Prairie)  
Red Deer College (Red Deer)  
Southern Alberta Institute of Technology (Calgary)

### British Columbia

Academy of Learning (Abbotsford)  
Camosun College (Victoria)  
Canadian Health Care Academy Inc. (Surrey)  
Careers Incorporated (Abbotsford)  
Granton Institute of Technology (Vancouver)  
Okanagan University College (Kelowna)  
Sprott-Shaw Community College (Victoria)  
Summitt Career College (Kelowna)  
Thompson Career College (Kamloops)  
University College of the Fraser Valley (Delta)  
University College of the Fraser Valley (Abbotsford)  
Vancouver Career College (Abbotsford)  
Vancouver Career College (Vancouver)  
Vancouver Career College (Burnaby)  
Vancouver Career College (Chilliwack)  
Vancouver Career College (Surrey)  
Vancouver Career College (Coquitlam)  
Vancouver Career College (Victoria)  
Vancouver Career College (Kelowna)  
Vancouver Community College (Vancouver)  
West Coast College of Health Care (Surrey)  
Western Canada Education Centre (Kamloops)

### Manitoba

Robertson College (Winnipeg)  
Winnipeg Technical College-Pembina Campus (Winnipeg)

### New Brunswick

Compu College School of Business (Moncton)  
New Brunswick Community College-Saint John (Saint John)

### Newfoundland

Compu College School of Business (St. John's)  
Compu College School of Business (Stephenville)

### Nova Scotia

Cape Breton Business College (Sydney)  
Compu College School of Business (Dartmouth)  
Nova Scotia Community College (Halifax)

### Ontario

Centennial College (Scarborough)  
College Boreal (Sudbury)  
CTS Canadian Career College (Sudbury)  
CTS Canadian Career College (North Bay)  
Fanshawe College (London)  
Humber College (Toronto)  
Kingston Learning Centre (Kingston)  
La Cite Collegiale (Ottawa)  
Medix (Toronto)  
Mohawk College (Hamilton)  
Niagara College (Welland)  
Sheridan College (Brampton)  
St. Clair College (Windsor)

### Prince Edward Island

Compu College School of Business (Charlottetown)

### Quebec

CFP Chateauguay (Chateauguay)  
Ecole de metiers des faubourgs de Montreal (Montreal)  
Fierbourg CFP (Charlesbourg)  
ICS Learning Center (Montreal West)  
Riverside Park Technology Centre (LaSalle)

### Saskatchewan

Saskatchewan Institute of Applied Science & Technology (Saskatoon)





ASSOCIATION OF DEANS OF PHARMACY OF CANADA  
(ADPC)

ASSOCIATION OF FACULTIES OF PHARMACY OF CANADA  
(AFPC)

CANADIAN ASSOCIATION OF CHAIN DRUG STORES  
(CACDS)

CANADIAN ASSOCIATION OF PHARMACY TECHNICIANS  
(CAPT)

CANADIAN PHARMACISTS ASSOCIATION  
(CPhA)

CANADIAN SOCIETY OF HOSPITAL PHARMACISTS  
(CSHP)

NATIONAL ASSOCIATION OF PHARMACY REGULATORY AUTHORITIES  
(NAPRA)

THE PHARMACY EXAMINING BOARD OF CANADA  
(PEBC)

OFFICE OF THE SECRETARIAT



1785 ALTA VISTA DRIVE, OTTAWA ON K1G 3Y6

TEL.: 613-523-7877 • FAX: 613-523-0445

[www.pharmacyhr.ca](http://www.pharmacyhr.ca)

[hmohr@pharmacists.ca](mailto:hmohr@pharmacists.ca)