



Development of a Curriculum for Foreign-trained Pharmacists Seeking Licensure in Canada

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Demand for well-qualified health care professionals (including pharmacists) is projected to increase over the next ten to twenty years. In many jurisdictions, immigration will become an increasingly important human resource to replace aging, retiring workers and drive ongoing economic prosperity and growth. A lack of a systematic professional development and enculturation program for immigrant-professionals may result in unnecessary barriers. Bridging education provides a structured system for continuing professional development of professionals educated outside North America to acquire competencies and meet domestic standards of practice. The International Pharmacy Graduate Program in Ontario (Canada) has developed a model that has been recognized by the provincial government as “best-practice” for bridging education. This model consists of five elements: prior learning assessment and recognition, individualized learning plans, mentorship, distance learning opportunities, and peer-network formation. In particular, individualized learning plans link to a series of university-based courses (Canadian Pharmacy Skills I and II) benchmarked to B.Sc.Pharm educational outcomes. This paper describes development of these courses and results on candidates’ success rates in national licensing examinations.

Keywords: Bridging education; Health professionals education; Immigrant-professionals; Foreign-trained professionals; International pharmacy graduates

BACKGROUND

The imbalance between supply and demand of well-qualified pharmacists appears to be a growing, global phenomenon (Taylor *et al.*, 2004). In the United States, the Pharmacy Manpower Project has estimated that, by 2020, there will be a shortage of approximately 240,000 pharmacists (Knapp, 2002). In some countries, enrolments in existing pharmacy

programs are increasing, and/or new schools of pharmacy are being planned (Taylor *et al.*, 2004). Despite such attempts to address the supply-side of the workforce equation through increasing seats at accredited university programs, employers continue to recruit foreign-trained pharmacists as a way of meeting short- and mid-term labour market needs.

The province of Ontario (Canada) demonstrates an unusually high reliance on foreign-trained pharmacists to complement the domestically educated professional workforce due to recent expansion of the community pharmacy sector and an inelastic supply of domestically educated practitioners (Austin, 2003). Each year for the past decade, more than 40% of all new registrants with the Ontario College of Pharmacists (OCP, the licensing and regulatory body for the profession of pharmacy in Ontario) receive their pharmacy education and training outside North America. Across Canada, there continues to be a strong demand for pharmacists, and in many provinces (notably British Columbia and Alberta), foreign-trained pharmacists are being actively recruited by large pharmacy employers to immigrate to Canada.

While Canada, and other “new world” countries such as the United States, Australia and New Zealand, have a long tradition of nation-building through immigration, the experience of well-qualified professional immigrants is relatively new. Where, in the past, many immigrants came to these countries possessing manual skills or trades, many of today’s immigrants come with high levels of education, extensive experience, and commensurate levels of expectation regarding their economic and social prospects in their adopted homeland.

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For professions such as pharmacy, currently grappling with a supply-demand imbalance in the workforce, immigration may be a necessary and important human resources planning tool. For example, in Ontario, it is difficult to imagine how the profession of pharmacy could function without the contribution of foreign-trained pharmacists; fully 25% of all licensed pharmacists in the province are from outside Canada or the United States. While the experience in Ontario is unusual, it is not unique, and in many ways may presage the experience in other jurisdictions and professions; as such, pharmacy in Ontario may be seen as a “canary in the coal mine” of the health professions workforce (Austin, 2003).

Starting from the early 1990s (corresponding to the beginning of a sharp rise in the numbers of foreign-trained pharmacists seeking licensure in Ontario), anecdotal comments suggested some individuals may have been experiencing difficulties in meeting Canadian standards of practice and regulatory requirements. Case reports detailing issues related to communication skills, socio-communicative competencies, scope of practice, and therapeutic knowledge base began to appear. In 2000, systematic research was undertaken to understand the impact of such a large number of foreign-trained pharmacists in the profession, and the ways in which the profession could best assist these individuals in meeting standards and expectations of practice (Austin, 2003).

This research identified a variety of issues related to integration of non-North American educated pharmacists into professional practice in Ontario. One study examined the continuous professional development activities and outcomes of foreign-trained pharmacists as part of the Ontario College of Pharmacists’ Quality Assurance and Peer Review Program (Austin *et al.*, 2004). In this study, pharmacists educated outside North America had a higher risk for not being able to meet standards of practice as defined by the College, and thus required peer-assisted continuous professional development. In this study, 13.6% of all pharmacists in Ontario were unable to meet standards of practice in one or more areas of clinical knowledge, information gathering, patient management strategies, and/or communication skills, as compared with 28.9% of foreign trained pharmacists. Factor analysis indicated the particular importance of communication skills and interpersonal communicative competency in meeting standards of practice, and this was identified as a significant area for improvement for some foreign-trained pharmacists.

As part of a needs assessment to identify ways to assist foreign-trained pharmacists, a retrospective review of complaints and discipline records from the College were reviewed (Austin, 2003). Retrospective

analysis of over ten years of discipline records indicated that foreign-trained pharmacists represented more than 63% of all guilty findings, despite representing only 25% of all registered pharmacists. Of particular importance, this study demonstrated that the nature of disciplinary issues involving foreign-trained pharmacists was qualitatively different than for their North American peers—while the latter were generally found guilty of offences related to financial improprieties (such as fraud, excessive billing, etc.), foreign-trained pharmacists were more frequently cited for practice-related errors (including dispensing errors leading to patient harm, incorrect interpretation of prescriptions, and scope of practice violations).

Cognisant of the need to balance fair and transparent practices related to licensure of non-North American pharmacists with a need for public protection, the College recognized the need to develop more formal systems to assist foreign-trained pharmacists meet standards of practice to improve the quality of care. Prior to 1999, College requirements for licensure of non-North American graduates included:

- Successful completion of the Pharmacy Examining Board of Canada’s (PEBC) Evaluating Examination (to establish comparability of academic preparation in pharmacy).
- Attainment of minimum standards of English- or French-language fluency (as measured by commercially available tools such as the Test of English as a Foreign Language (TOEFL) and the International English Language Testing Service (IELTS).
- A minimum of 32 weeks of in-service studentship training under the direct supervision of a practicing pharmacist, and completion of prescribed training reports.
- Successful completion of the PEBC’s Qualifying Examination (a written, case-based test of clinical knowledge, also completed by Canadian and American candidates for licensure).
- A minimum of 16 weeks of in-service internship training under the supervision of a practicing pharmacist, in which candidates for licensure begin to assume greater independence and autonomy.
- Successful completion of the Ontario College of Pharmacists’ Jurisprudence Examination (a written test of pharmacy law, also completed by all Canadian and American candidates for licensure).

As part of the needs assessment research, focus groups with pharmacist-supervisors (or preceptors) of students and interns, as well as foreign-trained pharmacists, were undertaken to identify areas of

difficulty experienced by individuals seeking licensure in Ontario. Results from these focus groups suggested that some individuals struggled with the relative lack of structure and training support and had difficulty passing either or both internship and examination requirements, despite meeting standards for fluency, comparability of academic preparation in pharmacy, and studentship. In large part, issues related to appropriate socio-communicative competency skills appeared most problematic (Austin and Galli, 2003). Such skills, for example, may account for a foreign-trained pharmacists' hesitancy in apologizing for, or accepting responsibility for, dispensing errors, thus leading to disciplinary cases before the College. Understanding the scope of practice of pharmacists, the role of pharmacists in the Canadian health care system, the value of teamwork within the pharmacy, and the importance of multi-disciplinary work with other professionals may all be new concepts for some foreign-trained pharmacists who may be accustomed to different styles of practice.

Starting from 2001, a major change occurred in the licensing examination for pharmacists in Canada. The PEBC instituted an additional component to its written qualifying examination. An objective structured clinical examination (or OSCE) component was added, wherein candidates for licensure would be required to demonstrate clinical competency and integration of clinical knowledge and communication skills through a series of patient care simulations involving standardized patients. The OSCE component (already a part of the licensing process of physicians in Canada, as well as part of the College's Quality Assurance and Peer Review process) presented unique challenges for foreign-trained pharmacists who may have been quite unfamiliar with this assessment method, as well as facing certain linguistic and cultural differences.

In an effort to address these issues and provide support for foreign-trained pharmacists seeking licensure, the College provided the University of Toronto with a \$450,000 grant to develop courses and supports aimed at addressing issues identified through needs assessment. This investment in turn was applied to secure additional governmental funding to support development of the International Pharmacy Graduate (IPG) program at the University of Toronto.

THE IPG PROGRAM MODEL

The IPG Program was developed with the mandate of providing skills-enhancement education and training for foreign-trained pharmacists. The IPG

Program model was built upon five distinct pillars:

1. *Prior Learning Assessment*. Recognizing the heterogeneity of experiences, education and background of foreign-trained pharmacists in Canada, it was readily apparent that a one-size-fits all educational model would not be responsive to individual's needs. As a result a prior learning assessment model was developed that incorporated linguistic, socio-communicative, and clinical skills evaluation. Results of the Prior Learning Assessment are used by IPG program staff to develop individualized learning plans for candidates, to provide them a roadmap for skills enhancement utilizing a variety of academic and community support (including English-as-a-second-language, resume preparation, and workplace skills) resources.
2. *Canadian Pharmacy Skills (CPS) I and II courses*. A series of academic courses were developed to provide individuals with knowledge, skills, and assessment necessary to meet standards of practice. These courses are benchmarked to the undergraduate program at the University of Toronto.
3. *Mentorship*. Needs assessment research illustrated the alienation and isolation experienced by some foreign-trained pharmacists. Such disengagement from the professional community lessens the likelihood of professional involvement or continuous professional development, and may constrain practice and career decisions. In order to facilitate professional enculturation and provide support and networking opportunities, mentors (practicing pharmacists) are matched with foreign-trained candidates for licensure to act as a sounding board, coach, resource person, and friend.
4. *Distance Learning*. Where feasible, certain components of the CPS program are made available in a distance learning format to facilitate access and provide asynchronous learning opportunities.
5. *Peer Network*. A critical component of the program was the recognition of the value of social learning environments, and the need to encourage formation of peer networks to facilitate both professional learning, social engagement, and a sense of pride in profession.

The centrepiece of this model was development of the Canadian Pharmacy Skills (CPS) courses. Needs assessment research had indicated that most foreign-trained pharmacists immigrating to Canada possess a high degree of declarative knowledge, particularly as related to pharmaceutical and bio-medical sciences, but many had difficulty in translating this within a clinical context. For many individuals, key

components of North American health care (e.g. autonomy of patient decision making, avoidance of paternalism and judgment, team work, negotiation of health care outcomes, questioning of physicians' prescriptions, etc.) were very different, if not quite opposite, to their previous experience and practice. Learning how to apply previously acquired scientific knowledge and clinical experience into a North American health care context, while simultaneously dealing with socio-cultural and linguistic barriers was a significant challenge to meeting standards and expectations of practice.

BLUEPRINT FOR THE CPS CURRICULUM

Focus group meetings with foreign-trained pharmacists and their preceptors led to the conclusion that any courses or programs aimed at assisting foreign-trained pharmacists must be rigorous, and at the same level as university-based education. Such courses could not be seen as merely "exam preparation" courses since they would be viewed with suspicion and disdain by both the professional community and foreign-trained pharmacists themselves as short-sighted and lacking in substance. In order to build a curriculum for foreign-trained pharmacists that was on a par with the undergraduate (B.Sc.Pharm) entry-to-practice curriculum at the University of Toronto, a blueprinting approach was developed that identified key competencies and expectations, as well as areas for skills enhancement.

The Association of Faculties of Pharmacy of Canada (AFPC) has published educational outcomes statements for graduates from Canadian schools of pharmacy (AFPC, 1998). These outcomes include both pharmacy-specific statements as well as general outcomes associated with university-educated citizens (see Appendix A). A review of these outcomes, competency statements, and their associated competency units was undertaken and compared with the results of a needs assessment. Based on this analysis, it was determined that key knowledge and skills gaps related to: "Meets Patients' Drug Related Needs"; "Assumes Legal, Ethical, and Professional Responsibilities"; "Provide Drug and Drug Use Information and Recommendations"; and "Educate about Drugs, Drug Use, and Health Promotion" (Appendix A). While other competencies were recognized for their importance (for example, Drug Distribution and Practice Management), needs assessment analysis indicated that these competencies were either not significant learning needs for foreign-trained pharmacists, or were best taught and assessed in studentship or internship settings.

This analysis indicated that a curriculum for foreign-trained pharmacists need not entirely recreate an undergraduate B.Sc.Pharm program. Instead,

particular focus and attention could be placed on a stream of courses in the B.Sc.Pharm program related to pharmacy practice (for example, professional practice courses and labs, pharmacotherapeutics courses, communication skills, and self-medication courses) and social-administrative pharmacy (health care systems).

As with many pharmacy programs, the University of Toronto uses a "building-blocks" approach to the pharmacy curriculum. In this model, pharmaceutical and bio-medical sciences form the foundation upon which clinical skills are built. Thus, early years of the program are dominated by courses such as analytical, pharmaceutical, and medicinal chemistry courses, as well as bio-medical courses such as anatomy, physiology and microbiology, while later years are dominated by applied pharmacotherapeutics courses. Based on this assessment of undergraduate (B.Sc.Pharm) curriculum and the needs previously identified, a model for curriculum development for the IPG program emerged.

In this model, key competencies related to pharmaceutical care, patient education, and inter-professional collaboration were emphasized, and used to develop a list of courses (see Appendix B). A significant challenge in course design remained the level of English-language fluency (in speaking, reading, writing and listening) of candidates.

Previous research in prior learning assessment had identified the gap between minimal fluency requirements as outlined by OCP, and the level required for provision of safe and effective pharmaceutical care (Austin *et al.*, 2003). This research suggested that near-native language fluency was required to engage in the sophisticated patient interviewing, dialogue and assessment skills required to provide pharmaceutical care. Second-language speakers (whether immigrants to Canada or not) may experience difficulties coping with the subtleties of verbal and non-verbal communication that underlie complex phenomena such as establishing a trusting and covenantal relationship between patient and pharmacist, and negotiation of treatment regimens with physicians or other health care providers.

As a result, English for Specific Purposes (ESP) training was embedded in all courses across the IPG curriculum. Unlike traditional English as a Second Language (ESL) programs, ESP is a customized language support designed around the advanced requirements of professional practice. For example, listening skills are a staple of most ESL courses, and non-native speakers are provided with routines and drills to assist them in developing skills to discern the subtle differences between certain words such as "heart" and "hard". While such a skill is essential for pharmacists, it must be expanded beyond simple conversational English to include complex medical terminology and drug names. Through ESP training,

advanced discernment around drug names, medical conditions and other complex terms is possible, to provide support in ensuring that sound-alike (or look-alike) drug names (such as “Lasix” and “Losec”) do not become confused, leading to potential errors and patient harm. Furthermore, the discourse of patient interviewing is not axiomatic to foreign-trained pharmacists and the ESP curriculum deconstructs the model, focusing on targeted grammar and syntax.

Four streams of courses were identified as pivotal for the IPG program: pharmacotherapeutics, professional practice laboratories, professional practice theory, and communication skills. In virtually all courses, material for the IPG program was drawn directly from (or slightly modified from) original programming from the undergraduate B.Sc.Pharm program. Wherever possible, the same cases, teaching materials, course syllabi, assessment tools, and instructors were used, as a way of enhancing the face validity of the program within the profession, and ensuring that foreign-trained pharmacists did not receive a diluted version of pharmacy curriculum. The major change in the curriculum was to simply allocate more time to all lectures and labs, in recognition of the unique learning needs of IPG program candidates, and the need to embed ESP material in all courses. Thus, a 90 min lecture in depression in the undergraduate program would become a 180 min lecture in the IPG program. The lecturer would be encouraged to speak more clearly and slowly to emphasize correct pronunciation, ask frequent questions of the students to verify understanding, provide clear definitions of complex terminology, and highlight specific readings and clinical trials. Upon completion of the lecture, IPG program students would be responsible for the same learning outcomes and would receive the same type of assessments as undergraduate pharmacy students. Similarly, a 2 h dispensing laboratory in the undergraduate program would be allocated 4 h in the IPG program, although all laboratory outcomes would be met, and similar evaluation of students undertaken.

In building syllabi for specific courses, it became apparent (through prior learning assessment) that certain areas would require additional emphasis. Since most foreign-trained pharmacists coming to Canada come from developing countries, certain disease states may be relatively new or unfamiliar. While conditions such as malaria and infant dehydration are well understood by many candidates, other conditions (such as hyperlipidemia, depression, or anorexia) are without context. Sequencing of topics in the pharmacotherapeutic lecture series takes into account the complexity and relative newness of certain topics.

Development of syllabi for each course (including doubling of the time allocation) resulted in an intense and somewhat lengthy curriculum. To optimize learning, enhance course management, and facilitate scheduling, two separate program offerings were developed: Canadian Pharmacy Skills I (CPSI) (8 weeks) and Canadian Pharmacy Skills II (CPSII) (also 8 weeks). Each module is highly compressed, and consists of 35–45 h of contact hours (lectures, labs, tutorials, workshops) per week, and an expectation of approximately 15–20 h of pre-class reading and preparation per week. Course descriptions and hour allocations are provided in Appendix B. Course topics and assessments are sequenced according to expectations of the 4-year B.Sc.Pharm curriculum (the entry level degree in pharmacy in Canada at this time); CPS I provides teaching and assessment at the level of year 3 of the B.Sc.Pharm program, while CPS II is benchmarked to year 4 of the program.

Prior learning assessment results suggested that most candidates would require greater skills enhancement in the areas of writing and listening (Austin *et al.*, 2003). As a result, specific activities were developed in courses to enable teaching, learning, and assessment of these skills, in addition to speaking and reading. Examples of such activities include emphasis on documentation in professional practice laboratories, and submission of formal, written care plans in patient simulation activities. In active learning environments (for example, laboratories, workshops, tutorials) and in assessment settings (professional practice laboratories, clinical simulations, oral presentations), pharmacist-teaching assistants were partnered with English-language specialists who were not pharmacists. A team approach to teaching and assessment were modelled for students, and used to improve the quality and transparency of summative and formative feedback. Pharmacist teaching-assistants provide instruction and assessment in pharmacy-specific clinical skills areas, while English-language teachers provide instruction and assessment with respect to communicative competency. Tracking students' progress through the program, the value of this team approach is apparent. Over a relatively short 16-week period, significant improvements are noted in specific language areas particularly in listening skills, pronunciation, syntax and proxemics (non-verbal communication skills).

FINDINGS

A total of 331 students have participated in either or both CPS I and II. Currently, the program has been offered in Toronto and recently in Vancouver, the two Canadian cities most frequently selected by new

immigrants. Candidates in CPS I must successfully complete a series of final examinations to be promoted to CPS II. To pass the entire IPG program, candidates must successfully pass final examinations in CPS II. Currently, the program is a non-mandatory educational support for foreign-trained pharmacists; candidates for licensure need not take the program, nor pass CPS I/CPS II examinations, in order to take licensing examinations or successfully complete all pre-registration requirements. Currently, it is estimated that less than 20% of all foreign-trained pharmacists avail themselves of the CPS courses. Significant barriers to attendance include cost (tuition is approximately CDN \$11,000 per year, comparable to one year of tuition in the undergraduate pharmacy program at the University of Toronto), location (the program is currently only offered in major urban centres such as Toronto and Vancouver), and scheduling (the current program requires 16 weeks of full-time attendance; no part-time or flex-time delivery option has yet been developed).

Since the IPG program utilizes the same curriculum (including teaching materials and assessments) as the B.Sc.Pharm program, it is possible to compare results. Within the B.Sc.Pharm program, success, degree completion, and graduation rates are very high, routinely exceeding 95–97%. In large part this may be due to the rigorous procedures and relatively high academic standards associated with pharmacy programs in Canada. Pharmacy is a highly competitive program; approximately 1 in 10 applicants gain admission to the program at the University of Toronto. In comparison, the IPG program does not function on a competitive admissions basis. All candidates who can successfully meet pre-admission requirements (minimum fluency standards established by OCP and successful completion of the PEBC Evaluating Examination to establish comparability of academic preparation in pharmacy) may enrol in the program.

Furthermore, while successful graduation from the B.Sc.Pharm program is a requirement for licensure for University of Toronto students, IPG program students need not pass the CPS courses in order to sit or pass licensing examinations.

Of 264 candidates who have taken CPS I since inception of the program, 211 have successfully passed examinations and have been promoted to CPS II (= 79.9%). Of those who have attended (but not passed) CPS I, 12 have been able to pass licensing examinations (4.5%).

Of 211 candidates who have successfully completed CPS I, 175 have enrolled in CPS II (= 82.9%). Of this, 42 have successfully completed examinations in CPS II and have “graduated” from the program (= 24.0%). From this group, 40 (= 95.2%) have successfully completed licensing examinations.

Of the group who have passed CPS I, enrolled in CPS II but not successfully completed CPS II examinations, 153 (= 90.5%) have passed licensing examinations, and consequently chosen not to rechallenge the CPS II examinations. The Pharmacy Examining Board of Canada does not release statistics regarding differential success rates of foreign-trained compared to North American trained candidates; however anecdotal reports suggest that success rates on the Qualifying Examinations (Part I (written) and Part II (OSCE)) for first-time candidates is between 30 and 40%.

From the B.Sc.Pharm program, success rates on national licensing examinations are approximately 95–97% on the first attempt, with virtually 100% success on second attempts.

DISCUSSION AND CONCLUSIONS

As results indicate, CPS I and II provide important support in assisting foreign-trained pharmacists in meeting standards of practice as defined and measured on national licensing examinations. Success in the IPG program is associated with greater likelihood of success in these licensing examinations.

Of importance, the strength of this association is difficult to determine. While few individuals who pass CPS II examinations fail licensing examinations (<5%), many who do not pass CPS II are still able to pass PEBC Qualifying Examinations. Recall that CPS II is benchmarked to senior level (year 4) B.Sc.Pharm standards and assessments. These results suggest that academic programs may over-prepare students for standards of practice currently in existence, and tested at entry-to-practice.

A key finding of the IPG program is the importance of embedding ESP language supports throughout the curriculum, and providing additional time and resources to support learning of both clinical competencies and language skills. A vital component of the curriculum is the partnering of pharmacist teaching-assistants and English language teachers, and the development of formative and summative assessment models that allow input from both.

Integral to the success of this program was the decision to ensure the curriculum was not diluted or “dumbed-down”. Feedback from the pharmacy community was clear: for the IPG program to enjoy credibility and face validity amongst employers and practitioners, the same curriculum and assessments would be required. While pass-rates on national licensing examinations are an important measurement of success for the program, the program was not designed to be “exam-preparation”; rather it was conceived as skills enhancement education for adult learners.

The current model of CPS I followed by CPS II has resulted in certain challenges, and the inadvertent introduction of barriers to access based on cost, location, and scheduling. The IPG Program is currently developing a model of curricular development that will allow for more flexible programming, including a part-time (work/study) option that will allow candidates an opportunity to work part-time and earn money. Such a feature is of pivotal importance to many foreign-trained pharmacists who must balance professional development needs with day-to-day economic responsibilities associated with immigration to a new country with family members and other dependents.

A particularly vexing issue for the program continues to be the relatively low success rate for candidates within the program itself. From a cohort of 264 students who first enrol in CPS I, only 42 have actually passed final examinations in CPS II. This result is somewhat mitigated by the fact that a large number of candidates (~30–40%) simply drop out of CPS I and/or II when they pass the licensing examinations. Feedback from candidates themselves suggest a somewhat utilitarian approach to the IPG program. Despite positioning the program as skills enhancement education, it may be perceived by foreign-trained pharmacists themselves as examination preparation. This is understandable given the financial contingencies facing these individuals, and the need to become licensed and earn a meaningful income to meet family and financial needs. While the skills enhancement component is valued and appreciated, for most foreign-trained pharmacists (as with any immigrant group), the priority is frequently to earn enough money to support a family. Research is currently underway to identify strategies and incentives to encourage students to remain in the program and avail themselves of this educational opportunity even after passing entry-to-practice examinations.

Within the broader pharmacy community, there has been widespread acceptance of this program, and an appreciation for its impact on pharmacy practice. The value of skills enhancement training in preparing individuals for licensing exams is of importance; however, of greater importance is the need to ensure that all pharmacists—whether foreign-trained or domestically trained—are able to meet standards and expectations of professional practice as they relate to provision of pharmaceutical care.

A significant benefit of the IPG program has been the development of important and unique partnerships between regulators, educators, employers, and government, all of whom have similar interests in ensuring safe and effective practitioners. Rather than forcing well-qualified professionals from other countries to attempt licensing examinations and

other regulatory requirements in a hit-and-miss manner, a structured and systematic approach to skills enhancement education provides an important support to allow for more effective and efficient integration into the professional workforce.

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APPENDIX A: EDUCATIONAL OUTCOMES AND STANDARDS OF PRACTICE STATEMENTS

Association of Faculties of Pharmacy of Canada (AFPC)

Educational Outcomes for a Baccalaureate Pharmacy Graduate in Canada (1998)

Professional Outcome #1: *Meet patients' drug-related needs*

Outcome Unit: Pharmacy graduates, in partnership with patients and other health care providers, use their knowledge and skills to meet patients' drug-related needs, with the objective of achieving optimal outcomes and maintaining or improving patients' quality of life.

Professional Outcome #2: *Assume Legal, Ethical and Professional Responsibilities*

Outcome Unit: Pharmacy graduates will be able to practice within legal requirements, uphold ethical and professional standards of practice, fulfil professional responsibilities, and contribute to the development of the profession.

Professional Outcome #3: *Provide Drug and Drug Use Information and Recommendations*

Outcome Unit: Pharmacy graduates provide information and recommendations to individuals and groups concerning drugs and drug use to ensure optimum and cost-effective patient care and to promote health.

Professional Outcome #4: *Educate about Drugs, Drug Use and Health Promotion*

Outcome Unit: Pharmacy graduates educate individuals to encourage appropriate drug use and to promote health.

Professional Outcome #5: *Manage Drug Distribution*

Outcome Unit: Pharmacy graduates meet patients' requirements for the accurate supply of quality pharmaceuticals by taking responsibility for the functions of distribution and preparation of pharmaceuticals.

Professional Outcome #6: *Understand Practice Management Principles*

Outcome Unit: Pharmacy graduates demonstrate an understanding of management principles with the goals of optimizing patient care and the use of practice resources.

Professional Outcome #7: *Apply the Principles of Scientific Inquiry to Contribute to the Profession and Society*

Outcome Unit: Pharmacy graduates will apply the principles of scientific inquiry to address pharmacy practice issues.

APPENDIX B: COURSE DESCRIPTIONS

Canadian Pharmacy Skills I (8 Weeks)

Pharmaceutical Care I—Applied Therapeutics Lecture Series

Therapeutics is designed to enhance the pharmacists' basic knowledge of pharmacotherapy and integrate it with acquired problem solving skills. Didactic sessions, accompanied by discussion of patient scenarios, will give the learner the opportunity to gain an understanding of specific chronic disease states and the management of drug-related problems commonly encountered in pharmacy practice. The didactic portion of the lecture serves to reinforce the pathophysiologic and pharmacotherapeutic issues required to identify actual and potential drug-related problems (DRPs). The student will be required to apply recently acquired knowledge to a problem-solving framework in order to create care plans for the patient scenarios. Students will be required to explain and justify any proposed intervention in their care plans in a concise and comprehensive manner—verbally or in written form. Upon completion of this course, students should be able to assume responsibility for

the common issues arising in the management of a patient's drug therapy.

Course Contact Hours: 51 (Interactive large-group lectures)

Communication Skills for Pharmacy Practice

This course is based on the elements of interpersonal and professional communication that pharmacists require to communicate proficiently, addressing and promoting the public's health-care needs. A series of class seminars will utilize interactive discussions and role-playing scenarios to teach and develop effective oral, interpersonal, written and presentation skills for the purpose of professional pharmacy practice.

Course Contact Hours: 42 (Interactive large-group lectures, small-group tutorials, role-playing)

Basic Professional Practice Laboratories

Professional Practice Labs (PPLs) are intended to provide learners with the opportunity to gain practical experience in a simulated dispensary setting and demonstrate the application of knowledge, skills and values discussed in the classroom setting. Fulfilling the course outcomes will require assimilating material from other pharmacy courses, particularly Jurisprudence, Drug Information, Therapeutics and Communication Skills; it is meant to integrate many aspects of these courses. Participants will be expected to prepare prescriptions efficiently and accurately, maintain patient profiles and perform legally required documentation activities, while demonstrating organizational skills. Telephone simulations will provide an opportunity for direct patient-care skills to develop. Participants will be trained on three pharmacy computer software systems. Working with a team of pharmacists, pharmacy technicians and English teachers, students are expected to integrate all their skills, while receiving positive and constructive feedback.

Course Contact Hours: 21 (Laboratory and tutorial)

Patient Counselling Skills

This integrated course provides learners with the opportunity to develop patient counselling skills, while identifying, preventing and resolving drug-related problems. Fulfilling these outcomes will require assimilating material from other CPS courses, including Therapeutics, Drug Information, and Communication Skills; it is meant to integrate many aspects of these courses.

Course Contact Hours: 44 (Large-group lecture, small-group tutorials, role-playing)

Professional Practice Theory I

This series of lectures, tutorials, seminars and self-study will provide learners with exposure to

professional practice theory in Ontario. Federal and provincial pharmacy legislation, drug information, Canadian drug names and the Canadian Health Care system are among the topics that are encompassed by this course. Completion of this module will enable learners to practice legally, ethically and professionally, using developed critical thinking and problem solving skills. This course is linked to Basic Professional Practice Labs, where learners are expected to apply lecture theory in a laboratory setting.

Course Contact Hours: 48 (Interactive large-group lectures, small-group tutorials)

Canadian Pharmacy Skills II (8 Weeks)

Pharmaceutical Care II—Applied Therapeutics Lecture Series

See description for Pharmaceutical Care I

Course Contact Hours: 45 (Interactive large-group lectures)

Professional Practice Theory II

This series of lectures, tutorials, seminars and self-study will provide learners with exposure to professional practice theory in Ontario. Federal and provincial pharmacy legislation, drug information, and practice management issues are among the topics that are encompassed by this course. Completion of this module will enable learners to practice legally, ethically and professionally, using developed critical thinking and problem solving skills. This course is linked to Advanced Professional Practice Labs, where learners are expected to apply lecture theory in a laboratory setting.

Course Contact Hours: 51 (Interactive large-group lectures, tutorials, seminars)

Advanced Communication Skills

Learners will build on the foundations previously learned in CPS I through Communication Skills and Patient Counselling. Language skills such as summarizing, paraphrasing, transitioning, clarification and systematic interviewing will be emphasized and reinforced through large group activities. Flexibility in interviewing in order to meet specific patient needs is an expected outcome. In small groups, learners will have the opportunity to role play with

standardized patients and receive feedback from both pharmacists and English teachers.

Course Contact Hours: 30 (Interactive large-group lectures, tutorials, role-playing)

Self Care—Assessment and Counselling Skills

Using team based case presentation and role plays, students will have an opportunity to integrate skills of problem solving, self-directed learning and presentation in order to acquire knowledge of self-care topics. In the team based case presentation portion, each group will be responsible for preparing an oral presentation. Following the case presentation, a question and answer period will follow which the presenting team must field questions from the group. The facilitator will then lead a mini-case study seminar pertaining to the same topic. Participation is required and will be graded in this portion. In the week following, multiple role plays hi-lighting the differential diagnoses and therapies of the same topics will be presented. Each student will have the opportunity to act in role plays and to assess their peers' performance.

Course Contact Hours: 42 (Interactive large-group lectures, tutorials, role-playing)

Advanced Professional Practice Labs

Advanced labs provide an opportunity to consolidate jurisprudence, drug information and prescription processing skills in preparation for independent practice, e.g. transferring and copying prescriptions, receiving verbal orders for narcotic and controlled drugs and explaining drug plans to patients. Drug information requests will be researched and documented. Compounding calculations, techniques and preparations will be completed. Patient charts will require the preparation of care plans. Prescriptions will be checked for accuracy for release to patients. Workshops on devices (blood glucose monitoring devices) will provide learners with practical, hands-on experience. Tutorials on third-party management issues and payment will prepare learners with practical solutions to common practice problems. Telephone skills will be further developed and applied in the Professional Practice Labs.

Course Contact Hours: 18 (Laboratories, tutorials, role-playing)