STATEMENTS

Cooperation in Pharmacy Education in Canada and the United States

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Although the education of student pharmacists and the practice of pharmacy in Canada have many similarities with that in the United States, there also are differences. The planning of curricula in pharmacy education is of particular importance to the advancement of pharmacy in Canada because of significant changes in the scope of practice in several provinces, and in how community pharmacy is reimbursed for the services it can, or should, provide. Greater dialog between Canadian and American pharmacists has the potential not only to impact practice on both sides of the border but also to improve collaborations among Canadian and American pharmacy educators. This article provides background information and some suggestions on how to build partnerships in pharmacy education between Canada and the United States. Consortia-like arrangements have some particular promise, as does engaging border-states and provinces in regional meetings and other activities. By working together, Canadian and US pharmacy educators have the opportunity to implement the best of what each has to offer and to devise new and better ways to educate future and existing pharmacists.

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INTRODUCTION

In 2008, Austin and Ensom reviewed the state of pharmacy education in Canada and identified trends and compared and contrasted aspects of Canadian pharmacy education with what was happening in the United States.¹ Significant issues facing academic pharmacy in Canada were explored, including the training of future academics, enhancement of existing bachelor's degree programs, development of continuing professional development programs to ensure the existing pharmacy workforce is "fit for purpose," and the licensure of foreign-trained pharmacists. They noted that pharmacy education in Canada is built upon a foundation of publicly funded universities with a strong research base. They also discussed the expanding role for pharmacists in a system with increasing interprofessional collaboration that, in some cases, is being driven by the provincial governments. This is particularly true in Alberta where the Primary Care Initiative² has resulted in the development of Primary Care Networks where a group of family physicians work with Alberta Health Services and other health care professionals, including pharmacists and nurses, to coordinate the delivery of primary health services. Another study

involving the integration of a pharmacist into a team with a physician and nurse practitioner reported their experiences and perceptions of the successes and challenges of their collaborative effort, as well as ideas for innovation.³ The study also shed light on the continuing professional development needs of pharmacists as a result of the broadened/additional patient care skills needed within an interdisciplinary care team.

As this interprofessional mechanism to deliver patient care evolves, along with new payment models, academic pharmacy is considering how best to provide the highly skilled professionals who are needed. The doctor of pharmacy (PharmD) degree is an important qualification and will eventually be the standard entry-to-practice qualification for pharmacists in Canada. The timing of this change remains unclear, although the Association of Faculties of Pharmacy of Canada (AFPC) has set the goal of 2020. Currently in Canada, for each province other than Québec, the first professional pharmacy degree is a bachelor of science in pharmacy. In Québec, both of the Faculties of Pharmacy are first-professional degree PharmD programs. In addition, The University of Alberta is working towards approval of a PharmD program at the entry level of education using a model that moves up to 10% of the students into a PharmD track after graduation with the BSc. The first PharmD graduates are expected in 2013 with practicing pharmacists becoming eligible for admission to the program in 2013. The University of

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Toronto is committed to implementing a first-professional degree PharmD program as soon as possible. While the curriculum has been approved, the change in degree title has not, and approval is still under consideration by the Ontario government. Plans are currently underway to accommodate transition-in options for current students and practicing pharmacists through the university's postbaccalaureate PharmD program. Subsequent to these changes, there will be opportunities to develop advanced post-PharmD programs. Overall, there is a need for academic pharmacy to contribute to both postgraduate and continuing professional development programs, and to train future academics.⁴

In 2009, 2 of the 10 pharmacy schools in Canada (University of Alberta and University of Toronto) announced that their newly hired dean were Americans. With the dean at the University of British Columbia already an American, 30% of the Canadian deanships are filled by Americans. In addition, the new dean at the University of Saskatchewan spent a significant portion of his career in the United States. What could motivate these individuals to take on the challenges of a deanship in another country where pharmacy practice is similar to that in the United States but also has significant differences? Apparently, all saw unique opportunities available in Canada. But these individuals also see that while the practice of pharmacy, and the education of student pharmacists in Canada can learn, and has learned, from what is being done in the USA, the reverse is also true.¹ Nevertheless, the full potential of collaboration/collaborative efforts between US and Canadian pharmacists has yet to be realized. While collaborative relationships between deans, educators, and continuing professional development providers have emerged,⁵⁻⁷ pharmacists and pharmacy educators in Canada and the United States should increase their efforts to collaborate, cooperate, and deliberate on issues of relevance to pharmacy education and practice on both sides of the border. To elaborate on the effect of these and other influences on pharmacy education, the context of pharmacy practice in Alberta and Ontario are explored in more detail.

ALBERTA

In 2008, after extensive discussions between academic pharmacy, practice pharmacy, and the provincial government, Alberta enacted a law granting authorization for prescribing to pharmacists. At the same time, a new initiative was begun called the Alberta Pharmacy Practice Models Initiative (PPMI).⁸ Administered by the Alberta Pharmacists' Association, this demonstration project was

funded by Alberta Health and Wellness. The purpose of the PPMI was to explore how community-based pharmacists can be reimbursed for using their clinical skills and expanded scope of practice in the provision of medication management services. Pharmacists involved in the PPMI collected data on how the provision of cognitive services impact their patients' overall health and drug therapy outcomes from March 2009 to March 2010. The data are being analyzed and will be used to help decision makers as they explore the value of such services and alternative payment models. This PPMI has a focus on reimbursement and thus differs from the PPMI recently announced by the American Society of Health System Pharmacists (ASHP) that focuses on the model itself.⁹ Importantly, the pharmacy scope of practice implemented in Alberta (and increasingly in other provinces) already incorporates much of the ASHP PPMI as well as the Canadian Blueprint for Pharmacy¹⁰ and reflects the advances being made in Canadian pharmacy practice. The results of PPMI will also inform development of continuing education programs and curricular changes to meet practice needs in the province.

The prescribing model for pharmacists in Alberta is defined by 3 categories.¹¹ Drugs available only by prescription in Alberta can be prescribed by pharmacists either by adapting a prescription or prescribing in an emergency. Adaptation means that the pharmacist modifies an existing prescription either to meet the unique needs of an individual patient or to extend therapy on an incidental basis when the original prescriber is unavailable. Emergency prescribing enables pharmacists to prescribe if deemed essential when patients are unable to access other health services. Schedule 1 drugs (largely narcotics) are not authorized for pharmacist prescribing. While authorization for these first 2 categories of prescribing is available to all pharmacists, a third category, additional prescriptive authority, is only given to pharmacists who successfully complete an application process to the Alberta College of Pharmacists (the licensing body). This ensures the competency of these pharmacists given additional prescriptive authority and is a privilege not available to pharmacists anywhere else in North America. A goal of the Alberta PharmD program will be for newly graduated pharmacists to be fully qualified to apply for this prescribing authority.

Another important opportunity in Alberta is the implementation of a single province-wide electronic health record through the Alberta NetCare initiative.¹² There is near universal agreement that a secure electronic health-record system in Canada would improve health care, and establishing such a system in the United States has been promoted by US President Barack Obama.¹³

Alberta's electronic health record is designed to be a secure lifetime record of every Alberta resident's key health care information. This would include but not be limited to basic information about drugs, allergies, immunizations, and laboratory tests. The electronic health record would be accessible to all authorized health professionals. There is also a goal of making de-identified patient data available for research purposes. Unfortunately, implementation of electronic health records has been a slow process and numerous hurdles remain before pharmacists become fully integrated into a comprehensive electronic health record system. Nevertheless, effective July 1, 2010, all pharmacists in Alberta became eligible to order laboratory tests.

Finally, the Alberta provincial government announced in fall 2009 its Pharmaceutical Strategy for Alberta Phase 2.¹⁴ This strategy focuses on generic drug prices and expands the role of pharmacists by moving reimbursement in community pharmacy from a product to a patient focus. Specifically, the provincial government is working closely with Alberta pharmacists and pharmacies to have pharmacists spend more time using their knowledge and skill to counsel and advise patients, and to be reimbursed for such activities. A similar initiative is underway in Ontario.

ONTARIO

Like Alberta, the scope of pharmacy practice in Ontario has been expanded. Under what is known as Bill 179 (Regulated Health Professions Statute Law Amendment Act, 2009), which received final approval on December 15, 2009, pharmacy and other health professions are authorized to amend their Regulated Health Professions Acts. The changes in the regulatory acts were intended to increase access to health care and improve chronic disease management. Under this enhanced scope of practice, pharmacists can adapt and modify prescriptions without prior consultation with physicians, and can administer injections and drugs by inhalation. Regulations regarding notification of other primary care providers about changes that are made in a patient's medication therapy are under development.

Bill 179 also expanded the definition of a pharmacy to include a "remote dispensing location." This opens the door to automated dispensing machines with audio-video connections to pharmacists or supervision by pharmacy technicians. This change creates the possibility of expanded access to pharmacy services in remote areas where it is not economically feasible to support a pharmacy. However, there is no restriction on where the remote dispensing site can be. Thus, there is considerable

concern that business models with limited direct patient contact with pharmacists will develop. Remote dispensing machines are already being operated in 2 hospitals in Ontario, which is possible because hospital pharmacy does not come under the Pharmacy Regulation Act.¹⁵

Currently, Ontario is experiencing a contentious debate regarding the reimbursement mechanisms used to pay for pharmacy services by the government. Pharmacy is essentially supported by a direct dispensing fee mechanism and an indirect mechanism known as the *professional allowance*. This structure was put in place in 2006 by Bill 102 (Transparent Drug System for Patients Act, 2006).¹⁶ This act placed the direct fee at Can\$7 and the indirect mechanism at 20% of the generic medications sold by the pharmacy. The price of generic medications is regulated to be 50% of the price of the brand name product. This has resulted in Ontario paying relatively high prices for generic products while reimbursing for the direct cost of dispensing at a rate that does not cover the true costs, which are estimated to be Can\$14 per prescription. Over the last 9 months, the government was in negotiations with pharmacy to restructure these payment mechanisms, but those halted abruptly in March. Subsequently, the government proposed regulations to change the reimbursement model that would decrease the generic price of drugs to 25% of the brand name product and discontinue the professional allowance.¹⁷

To offset these losses in income, the government would begin to directly pay pharmacists for providing clinical services. The government also has offered to increase the dispensing fee by Can\$1 in urban areas and up to Can\$4 in rural and underserved areas. In addition, it would establish a new fund of Can\$150 million to pay for new clinical services. However, pharmacists argue that discontinuing the professional allowance removes nearly Can\$1 billion from the reimbursement system¹⁸ without an adequate increase in other payments. The government argues that its approach will increase access to drugs for Ontarians¹⁹ while pharmacists argue that it will devastate pharmacies, causing reductions in services and decreased access to pharmacists. Two of the largest chains in Ontario either discontinued or altered dramatically their plans for hiring new graduates and summer students in pharmacy immediately following the government's announcement.

Ontario is a net importer of pharmacists, with nearly half of the pharmacists licensed each year coming from outside the province. This has resulted in a large program for upgrading the skills of international pharmacy graduate at the University of Toronto.²⁰ This innovative program is supported by the government and greatly increases the likelihood that an international graduate will

meet licensing requirements. There has not been a recent workforce analysis to guide the number of graduates needed by the province. With the changes in reimbursement models, and the addition of remote technology as well as licensed pharmacy technicians, this will be much needed in the near future.

OPPORTUNITIES FOR COLLABORATION

As pharmacy education and the practice of pharmacy continue to evolve in both Canada and the United States, there are several areas that seem ripe for joint actions. First and foremost is the continued development of relationships between the American Association of Colleges of Pharmacy (AACP) and the AFPC. The joint meetings that these 2 organizations have held in recent years are a strong start, but now they need to be supplemented by formal working groups focused on specific issues of joint interest. Some specific areas to be considered include:

- developing common (or at least parallel) educational outcomes
- partnering on development and use of assessment tools, particularly those used for accreditation purposes
- sharing benchmark data on faculty research
- engaging in joint course development, particularly for distance learning
- building cross-border residency programs, particularly in border cities
- sharing joint preceptor training, particularly online programs
- creating experiential sites for elective international rotations
- collaborating on continuing professional development courses and nontraditional PharmD programs
- creating faculty development and retention programs
- establishing research networks, particularly for educational, practice, and outcomes research

A related collaboration that should be developed is between the Association of Deans of Faculties of Pharmacy of Canada (ADPC)²¹ and US deans. The Council of Deans within AACP could perhaps provide a US-based framework within which joint meetings could be held. This could include inviting ADPC to attend the annual dean's retreat that AACP holds, or perhaps inviting a small group of US deans to attend a portion of one of the ADPC meetings that are held each year in Canada. Conversely, faculty members of research-intensive universities in Canada could be invited to participate in meet-

ings with faculties of research-intensive universities in the United States. The goal of such interactions among the deans from each country would be to establish some specific activities from which both groups would benefit. These could be in the areas of preceptor training, shared experiential sites for international experiences, and curricular change, including novel delivery mechanisms.

Another area that should be explored is more joint meetings between related pharmacy societies in both countries. While each country certainly has independent issues to address, the issues that bind us far outweigh those that divide us. National US meetings are likely too large to provide an effective forum for Canadian pharmacists, but state- and province-based or regional meetings could be effective, particularly with states that border Canada. For example, the Northwest Pharmacy Convention held in Coeur d'Alene Idaho each May involving schools in Washington, Idaho, and Montana, could engage pharmacy organizations in British Columbia, Alberta, and Saskatchewan.

In May 2009, the second Triprofessional Conference was held in Alberta with co-sponsorship by the Alberta College of Pharmacists, the Alberta Pharmacists' Association, the College and Association of Registered Nurses of Alberta, the Alberta Medical Association, and the College of Physicians and Surgeons of Alberta. The first meeting was held in Canada in 2007 and attracted over 700 participants; the second meeting in 2009 focused on "Strengthening the Bond: Culture, Collaboration and Change." The goal was to focus on ways to overcome barriers and challenges in interprofessional working relationships among physicians, pharmacists, and nurses. The discussion often was frank, but it also was exceptionally productive, including participation by the Alberta Minister of Health and the new chief executive officer of the Alberta Health Board. This type of interaction is clearly something that would benefit the further development of interprofessional activities in the United States. Perhaps a start would be to try and involve some US pharmacists, nurses, and physicians in the next such meeting in Alberta.

Regional consortia of pharmacy schools provide another platform for collaboration that could advance pharmacy education. The deans of the Pacific Northwest pharmacy programs (including the University of British Columbia) met in 2005 to craft a regional response to the new accreditation standards being proposed at that time by the Accreditation Council for Pharmacy Education. This group evolved into the Northwest Pharmacy Experiential Consortium (NWPEC) and included Idaho State University, Oregon State University/Oregon Health & Science University, Pacific University of Oregon, University

of Montana, University of Washington, University of Wyoming, and Washington State University. NWPEC meets quarterly and is working to establish uniform logistics and structure for experiential education programs in the Northwest (eg, APPE rotation length) calendar for each academic year, evaluation process for student pharmacists, assessment of competencies and outcomes). The consortium's work aims to expand experiential opportunities for student pharmacists in the Northwest region by minimizing barriers to preceptor and site participation. The cooperation engendered by this consortium has assured that students from each participating school can have experiential placements in geographic locations without "overcrowding" from other Northwest colleges/schools of pharmacy. In addition, the consortium has provided a means to develop and implement a standardized preceptor training program for preceptors throughout the region. Inviting pharmacy programs in British Columbia, Alberta, and Saskatchewan to join in this effort could benefit programs on both sides of the border.

There is a tendency for each pharmacy school in Canada and the United States to view themselves as a completely independent entity and thus to implement all components of a pharmacy education program with minimal outside input. While there is increasing collaboration in terms of information sharing, there is little in terms of direct program/course/experiential sharing. Increasing our cross-border interactions has the clear potential to advance the education of student pharmacists by making available a far greater pool of resources. There are many potential advantages to several schools collaborating in course development, for example, where each takes the lead in 1 subject area and provides the resultant product to all of the others. As distance education technology continues to improve, there would seem to be few limitations to such cooperative efforts even across borders.

SUMMARY

Pharmacy education has many similarities in Canada and the United States. But perspectives on pharmacy practice, especially with respect to scopes of practice and reimbursement, differ. Several ideas are given in this article that could be advanced to improve the collaborations among Canadian and US pharmacy educators. Consortia-like arrangements would seem to have particular promise, as would engaging border-states and provinces in collaborations to explore student pharmacist education and continuing professional development programs through dialogue at regional meetings and other activities. By working together in new ways, Canadian and US pharmacists and pharmacy educators have the

opportunity to understand these differences and implement the best of what each has to offer, and to devise better ways of impacting and thus improving the care of patients by better educating future and existing pharmacists.

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