Entry-Level PharmD in Ontario: A UBC Alumnus’ Perspective

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In early 2013, the Ministry of Training, Colleges and Universities (the provincial government agency responsible for the administration of laws governing post-secondary education and training in Ontario) gave approval to the University of Waterloo (UW) and the University of Toronto to award entry-to-practice (E2P) Doctor of Pharmacy (PharmD) degrees to students graduating from their respective professional pharmacy programs (1). Much like what has already happened in Quebec (Université de Montréal and Université Laval have implemented E2P PharmD programs since 2007 and 2011, respectively) and in the United States, the pharmacy landscape in Canada is now shifting towards a PharmD degree as the initial professional degree to practice pharmacy (2,3).

Each university has had its own strategic approach in the transition to E2P PharmD. The following is an introduction to the E2P PharmD as it is being implemented in Ontario, with a focus on UW’s curriculum, structure and organization.

UW will officially accept all students into the E2P PharmD program from January 2014 onwards (the pharmacy program begins in January of every year at Waterloo). This means that students graduating in 2017 will have completed the E2P PharmD program in its entirety. Students graduating in 2015 and 2016 (myself included) will have the remaining years of their curriculum modified to meet the requirements for graduation with a PharmD, despite initially being accepted into a Bachelor of Science in Pharmacy (BScPhm) program since 2007 and 2011, respectively) and in the United States, the pharmacy landscape in Canada is now shifting towards a PharmD degree as the initial professional degree to practice pharmacy (2,3).

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The professional education and training of UW’s pharmacy program is unique as it is the only cooperative-based program in Canada. With the implementation of E2P PharmD, students will acquire 12 months of paid work experience during their four years in the program (previously, it was 16 months). This happens primarily in pharmacy practice-based environments including various community and hospital pharmacies across Ontario, and occasionally in other provinces as well. In addition to these traditional practice sites, there are also opportunities to work in long-term care, academia & research, government agencies and pharmaceutical companies. Three 4-month co-op work terms are distributed across the first three years of the program. The process is competitive; students apply for interviews with both cover letter and resume, choosing from a select pool of jobs posted by the university. Based on employers’ decisions and a ranking algorithm, students are matched to an organization and must then commit to work for a minimum of 35 hours per week for 16-18 weeks (4). The idea behind co-op is self-evident – it is an opportunity for students to apply theories learned in the classroom to a real-world environment while developing their communication skills and having contact with patients early on in their careers. Moreover, students benefit from experiencing a variety of practice sites and gaining a better understanding of potential career options after graduation. From a student perspective, it also provides a little bit of income to help cover tuition costs and pay down student loans!

The curriculum at UW follows an integrated, systems approach to the study of pharmacy. The first year of the program cements the foundational sciences, covering topics such as human anatomy &
The integrated structure of the curriculum is most evident in the Integrated Patient Focused Care (IPFC) courses that form the essence of the whole program and are interspersed throughout years two through four. In these courses, pharmacology, therapeutics, medicinal chemistry, toxicology and pathophysiology collide head-on in order to train students in solving drug-therapy problems (DTPs) for specific disease states within a patient-centric model of pharmaceutical care, all to help patients achieve better health outcomes (5). For example, in IPFC2 (the infectious disease module), the classification, pharmacology, medicinal chemistry, mechanisms of action of countless antibiotics are examined. No detail in the study of antimicrobial spectra is spared. This knowledge must then be applied to select disease states such as cellulitis, STIs and *Clostridium difficile* infections using a case-based, patient scenario approach. Students are organized into small groups of 5-6 where they are expected to manage a patient case, identify actual and potential DTPs, and present the case and the pharmacotherapy plan to class. This group work develops clinical problem solving, collaboration among peers and communication skills.

The final year of the program is what primarily distinguishes the E2P PharmD program from Bachelor’s level pharmacy training. The remaining eight months are divided up into four 8-week blocks of either classroom study or clinical rotations. One 8-week block is reserved for the last “semester” of on-campus training which includes the final IPFC course, a seminar, an elective and a students’ symposium which is essentially a formal case-study presentation of an individual pharmacotherapy workup plan for a specific case study (e.g. think elderly patient with multiple chronic conditions, taking a dozen or so medications who is hospitalized after falling down due to a drug interaction that causes orthostatic hypotension). The remaining blocks constitute the PharmD clinical rotations and form the cornerstone of the clinical training of the entire pharmacy program. During this time, students get direct patient care experience and are mentored by preceptors within what is called a “Community of Practice” – a model that is based on flexibility for each unique practice site, allowing students to have longer placements (4,5). This increases opportunities to establish therapeutic relationships with patients and to become more engaged within the local pharmacy community. By the end of these rotations, students will have mastered clinical problem-solving, can write a flawless SOAP note, and will embody the Pharmaceutical Care Practice model as described by Cipolle et al. (6).

As would be expected of all PharmD programs across Canada, the E2P PharmD program at the University of Toronto has similar experiential education requirements as UW’s. Officially, Toronto students participate in 44 weeks of hands-on clinical training spread across the four years of the program. Eight weeks of “early practice experiences” are distributed in the first 3 years while the remaining 36 weeks of “advance pharmacy practice experiences” compose the final year of the program (7).

As of this writing, several other notable schools including the University of British Columbia and the University of Saskatchewan are also transitioning their undergraduate programs into E2P PharmD programs, all with the aim of training highly skilled medication therapy experts and enabling students to fully embrace recent expansions in pharmacists’ scope of practice across the country (3). This article would be incomplete without a brief comparison between the E2P PharmD program at UW and the proposed changes to UBC’s undergraduate pharmacy program. Apart from UW’s co-op portion, the two programs are quite similar. Both require at least two years of prerequisites before entry into E2P PharmD and experiential learning is incorporated throughout the four years of the program with increasing emphasis in the upper years (8). Integration seems to be a recurrent theme for both programs where the content across many disciplines (pharmacology, medicinal chemistry, pathophysiology, and therapeutics among others) is integrated to develop students’ patient care skills in order to solve complex clinical scenarios delivered in a modular disease state or body system format. The idea is to directly foster application of this knowledge to address real-world problems facing today’s health care system. Overall, the two programs both from highly reputable universities have been vastly enhanced compared to their Bachelor’s counterparts in terms of curriculum breadth and depth as well as intensity and quantity of practical experience acquired. The only difference between the two programs (a relatively minor one, in my opinion) is that UBC’s expected program will emphasize structured clinical training and mentorship throughout the four years of their program via the 20 weeks of IPPE (Introductory Pharmacy Practice Experience) in years 1 – 3 and 24 weeks of APPE.
(Advanced Pharmacy Practice Experience) in the final year whereas the clinical rotations are reserved for the last 24 weeks of the program in 4th year at UW and are highly structured similar to the IPPE and APPE (8). With UBC’s history and experience of offering the first post-graduate PharmD program in Canada, the transition to an entry-level PharmD as the standard credential to practice in BC should be smooth and efficient considering that preceptors and clinical rotations are already in place and would only need to be adjusted to accommodate the E2P PharmD curriculum and schedule.

It looks like the entry-to-practice PharmD degree is here to stay and will eventually become the standard professional requirement to practice pharmacy in Canada. Hopefully, this new designation will produce graduates that can help address the inefficiencies in the Canadian health care system and improve patient health outcomes through better medication use.

References


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