

Curricular Renewal: Ensuring that Our Graduates Meet the Evolving Pharmacy-Related Needs of Canadians

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Over the past 10 to 15 years, pharmacy curricula have changed to prepare graduates of Canadian faculties of pharmacy to provide direct patient care. This change from a product focus to a patient focus has represented a real paradigm shift for professional programs, but pharmacy curricula now need to undergo further enhancement. Pharmacy programs are based on the educational outcomes of the Association of Faculties of Pharmacy of Canada (AFPC),¹ and current graduates certainly meet these requirements, with a focus on direct patient care. However, with changes in both health services delivery and the needs of Canadians, the role of the pharmacist will continue to evolve and expand. Pharmacy curricula need to stay abreast of these changes to ensure that graduates will continue to meet the pharmacy-related health care needs of Canadians.

There is now a strong move toward a team-based approach to the delivery of health care services, along with a renewed focus on primary care. Increasingly, the “provision of effective patient care places an emphasis on collaboration and teamwork, within and between health care teams in community settings and in the care provided in hospitals”,² and evidence suggests that patients attain better outcomes through such collaborative, interdisciplinary practice.^{3,4} Already, there is a growing recognition of the need for this type of practice in primary care, as seen by the development of family health teams, community health centres, and ambulatory clinics within hospitals, with health care providers from many disciplines working together. As such, pharmacists and other health care providers must become collaborative team players, with well-developed interpersonal skills. Furthermore, graduates must become competent and confident if they are to actively contribute as essential

members of the health care team. However, demonstration projects such as IMPACT (the Integrating family Medicine and Pharmacy to Advance primary Care Therapeutics project)⁵ seem to indicate that, upon graduation, pharmacists are not adequately prepared to

work effectively within a collaborative, primary care team environment and that they need additional training and guidance. Pharmacy curricula now include experiential programs, but these experiential components should start earlier and should be well structured, with a focus on the development of patient care skills and on interacting with other health care providers. Ideally, such experiential programs should form the foundation of curricula, rather than being perceived as “add-ons” to didactic knowledge transfer. They should allow students to apply incremental knowledge gained through didactic learning and to integrate information and skills within the practice environment.

Medical informatics, the field at the intersection of information science, medicine, and health care,⁶ has started to emerge as an important discipline. This field deals with the compilation, storage, retrieval, and optimal use of biomedical information for decision-making. With the explosion of evidence-based drug information, pharmacy informatics is emerging as a subdiscipline, and the importance of its inclusion in pharmacy curricula is becoming evident. Yet a survey of US pharmacy schools indicated that only 33% of curricula



included courses related to pharmacy informatics.⁷ Although critical appraisal, evidence-based pharmacotherapy, and library sciences are already covered, pharmacy informatics needs to be specifically addressed, with emphasis on understanding its direct application to practice. This component will help pharmacists to improve their medication-use practices and to extend their capabilities in this area.

The information technology explosion has made it easy for patients to directly access drug and health information, as well as enabling health care providers to collaborate with each other in a timely manner. With information about medications more freely available, there is a greater need for pharmacists to help patients interpret this information. Effective mobilization of knowledge for patients and health care providers necessitates that pharmacists become comfortable in the role of educators, with the ability to translate drug and health information effectively. The importance of this role is also becoming evident with the move toward personalized therapeutics, which entails counselling and education of patients with respect to their specific genetic make-up and selection of drug therapy.

The health care needs of Canadians are also changing. The aging of the baby boomer generation means that the specialty of geriatric pharmacotherapy must become a mandatory competency. Although geriatrics is already covered to some extent in pharmacy curricula, all students will benefit from practical experience in caring for patients in this age group.

The evolution of Canadians' health care needs is related not only to changes in demographic characteristics (such as age), but also to changes in consumers' knowledge level, changes in health services delivery, and the increasing need for effective use of information and knowledge translation. As a result, existing curricula must be enhanced to ensure that graduates can effectively meet the pharmacy-related health care needs of patients. Many pharmacy programs have already started to respond to these changes by strengthening courses related to critical thinking, information literacy, pharmacogenetics, and geriatric pharmacotherapy. There is a greater emphasis on interprofessional learning, on the assumption that this will translate into more collaborative teams in practice. However, more systematic changes are required to ensure that graduates develop skills and competency in collaborative, interprofessional team-building, retrieval and effective use of health information, and knowledge translation at the level of both patient and health care provider. Pharmacy

programs need to enhance their structured experiential programs to help graduates to develop strong patient assessment and management skills. Future health care will require pharmacists to effectively manage change, become key players within health care teams at all levels, and continue to meet the growing needs of Canadians. Pharmacy programs that continue to build in these areas will help students to become competent and confident graduates who are fully able to meet their patients' needs.

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