

A Look Back at Pharmacy in the Future

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Many pharmacists, including the authors of this Editorial, appreciate the challenges of change that we experience on a daily basis. It seems easy to recall the scope and type of changes that occur over short periods of time, say the past 3 months. However, few of us ever stop to consider the cumulative change that we will witness over the duration of our professional careers. Considering the magnitude of that change can be daunting. To get a sense of how much can change over the course of a person's career, consider the evolution of the formulary at the authors' institution over the past 30 years. In 1972, the formulary at St Paul's Hospital in Vancouver listed 284 drug entities. Now, just over 30 years later, only 65 (23%) of those original entities remain, but the formulary itself now contains almost 2600 drug listings. Just think of the expansion in drug knowledge that would have been required for a pharmacist who was practising back in 1972 to maintain his or her professional competency through to 2004!

Most pharmacists now starting their careers can look forward to at least 30 years in practice. If we anticipate a similar 10-fold increase in the number of drug products that will become available over that period, as well as an unpredictable explosion in new pharmacologic and gene therapies, preventive treatments, and medication delivery systems, it becomes clear that pharmacists starting their careers today face an exciting challenge. To succeed, these newly minted practitioners, as well as those of us who are more experienced, must develop strategies of lifelong learning: engaging in efficient methods of acquiring and assimilating new knowledge should become as intuitive as providing quality pharmaceutical care. For most professionals, the acquisition of new knowledge involves reviewing the professional literature, learning from peers, and gaining experience through practice.

We can certainly expect that accessing the professional literature will involve use of electronic

technology, but we must also have the self-discipline to actually review the information; we can be aided in this by strategies that "force" us to do so. New technologies, such as e-mail and on-line databases, will invariably save time by allowing convenient and efficient information retrieval, especially given that Internet access is commonly available on hospital wards. Now that the use of personal digital assistants is becoming more widespread, many pharmacotherapeutic resources can be accessed from the palm of one's hand with just a click of a button. Technology will continue to evolve alongside the practice of pharmacy, so pharmacists must continue to develop the necessary skills to access the most current information and apply it to patient care.

The second main source of knowledge is our peers. This source can be tapped through one-on-one discussion or through formalized information exchange. Making formal presentations can consolidate acquired knowledge for the presenting pharmacist, while the audience receives an effective and efficient review of a particular topic. Such presentations also generate discussion among peers, whereby clinical experiences can be shared and applied to cases encountered in practice.

By being attentive to the problems and solutions encountered through our daily provision of care to patients, we can educate ourselves about improvements in pharmaceutical care. This knowledge can be shared through yet another mutually beneficial opportunity for learning: service as a preceptor for a pharmacy student or resident. This type of activity motivates us to ensure that our own knowledge is current, so that the student or resident has a valuable clinical experience. In turn, we are offered a glimpse of current faculty teachings and practices from the perspective of the student or resident.

In 1982, Rodowskas¹ published an article that speculated on the future of pharmacy practice and continuing education. His article included the following prediction:



[There will be] major advances in the understanding of drug action at the molecular level and, with it, a closing of the gap between molecular and clinical knowledge. The components of the health care and educational systems are envisioned as linked through communications technology creating an on-going information flow that develops and continues the competencies of the providers while optimizing conditions for patient care.

This statement continues to resonate more than 20 years later. Drug and treatment discoveries over the next 30 years are expected to change therapeutics dramatically. To succeed as a “functional” pharmacist in 2034, we must develop and integrate mechanisms to facilitate information retrieval and application. Welcome to a career of lifelong learning!

Reference

1. Rodowskas CA Jr. Pharmacy education in the twenty-first century. *Contemp Pharm Pract* 1982;5(3):176-82.

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