

Should a PGY-1 Residency Be Mandatory for All Hospital Pharmacists in the Era of Entry-Level Doctor of Pharmacy Programs?

THE “PRO” SIDE

Contemporary hospital pharmacy practice continues to evolve to include a greater focus on clinical decision-making and medication-therapy management. Medication-therapy management has been shown to reduce morbidity in patients and, although not practised in every hospital setting in Canada, it remains a goal for hospital practice.¹ As such, pharmacists need to be trained to this level of practice, a level that calls for independent problem-solving and a higher set of clinical competencies than was required in the past. However, the educational outcomes associated with the new entry-level degree, as defined by the targets and definitions set forth by the Association of Faculties of Pharmacy of Canada (AFPC), are insufficient to allow pharmacy students to reach the levels of competency required. In contrast, the residency model has proven that it can provide this training, while also providing benefits to the organizations that offer residencies. I would suggest that the Canadian public would be best served if all pharmacists completed a residency before entering hospital practice.

As the Canadian health care system becomes more and more complex, greater emphasis is being placed on coordination of care and optimization of pharmacotherapy. Pharmacists, as pharmacotherapy experts, are increasingly asked to work within a collaborative clinical environment and are assuming growing levels of accountability for medication-therapy decisions. Medication-therapy management, as an example of this level of accountability, has been shown to reduce the risks associated with patient care and to generate superior outcomes.¹ This level of patient care, however, requires that the pharmacist be proficient in identifying drug therapy challenges and able to offer effective treatment plans. The challenge for current and future pharmacists is that increasingly complex cases are occurring in clinical settings associated with shorter lengths of stay, higher degrees of specialization, and an aging population with significantly greater comorbidity.²

In response to these and other pressures, the amount of experiential training in the new entry-level degree programs in Canada has been increased from what was available in previous programs. Students are getting greater exposure to the clinical setting, which gives them greater opportunity to participate in

patient care in a supervised environment. This is an excellent step, but such training gives the graduate only the basic competency required to enter the profession. The additional experiential training now being offered does not make the person an expert in resolving medication-therapy challenges. The AFPC educational outcomes³ specify that graduates should possess the skills and knowledge to manage medication therapy for “patients with common medication-therapy problems and patients who require urgent care” and that they should be “able to acquire the knowledge and skills required to manage patients with uncommon or highly complex medication-related needs”. As such, the AFPC acknowledges that graduates are not expected to independently care for such patients upon graduation but are expected to move toward being a more advanced practitioner over time.

Our US colleagues also believed that moving to an entry-level PharmD would negate the need for residency training and allow graduates to handle more complex clinical care effectively. Unfortunately, these changes to the educational programs did not radically change the landscape of clinical care in the United States and did not eliminate the need for post-degree residency training.⁴ In fact, the opposite has occurred, and there has been an explosion of residency training programs in that country since 2000. In the past 4 years alone there has been an increase of almost 50% in the number of residents entering accredited programs.⁵ The US experience would also suggest that the change from the BSc degree to an entry-level PharmD degree did not result in significantly altered levels of competencies among new graduates.⁶ During a 2005 roundtable hosted by the American Society for Health-System Pharmacists, it was suggested that new practitioners need the clinical maturity that a residency fosters.⁷ Residency training was felt to be an opportunity to “acquire skills that allow [new practitioners] to take on more complex patients.”

In addition to the benefits to patients, there are also benefits to the organizations that host residency programs, as suggested in a white paper on residency training produced by the American College of Clinical Pharmacy.⁸ According to the white paper, residents are seen as integral in expanding the clinical capabilities of an institution’s pharmacy department. They also engage in quality improvement and assessment activities, assist in staff development, and support innovative approaches to care. Furthermore, staff engagement and retention rates are higher in organizations with residency programs.⁸ As far back as 1993, Yoshida⁹ suggested that Canadian residency programs had a

benefit to cost ratio of 1.4 to 1, meaning that the benefit realized from a residency program was greater than the resources invested. My own experience suggests that residency programs are change agents: establishing a program advances pharmacy practice, introduces new methods to organizations, promotes safety and quality, and helps promote and initiate advanced services within organizations.

It is recognized that the current Canadian infrastructure is unable to support the number of individuals who require residency training. However, I do not see this as a reason to abandon mandating a higher level of training for those entering institutional practice. Quebec has succeeded in making a clinical master's degree a requirement for entry into hospital practice, demonstrating that such a call can yield a successful outcome. Effecting the same transition in other Canadian jurisdictions will require advocacy and support to change the perception of governments and the public regarding the benefits of optimally trained clinical pharmacists. Research in the United States has suggested that the goal of mandatory residency training for all pharmacists entering a position of clinical decision-making (in both institutions and the community) can be achieved by 2020 through partnerships between colleges and hospitals.¹⁰ Such a model should be studied and potentially adopted by Canadian institutions as a means to create a clear path toward training individuals to become advanced practitioners.

I fully support a call for residency training for all pharmacists entering institutional practice, as I feel it will benefit the profession, the organizations in which pharmacists work, and, most importantly, the patients receiving care.

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Competing interests: Allan Mills is a member of the Canadian Pharmacy Residency Board.

THE "CON" SIDE

Pharmacy residency programs are excellent training opportunities for graduate pharmacists who want to further develop their pharmacy practice skills. These programs have been the principal postbaccalaureate training path for pharmacists interested in hospital practice for over 50 years and are still sought after by numerous graduates across the country.¹ In this Counterpoint article, my aim is not to discount the utility or importance of pharmacy residency programs in Canada, but rather to provide considerations as to why residency training should not be mandatory for hospital practice in the era of entry-level doctor of pharmacy programs. Specifically, I will argue the "Con" side of this debate on 3 points: changes in pharmacy education, access to residency programs (beyond the hospital site), and supply and demand.

Pharmacy Education: Introduction of Entry-Level Doctor of Pharmacy Programs

The profession of pharmacy as a whole is in the midst of significant transformation,²⁻⁴ as evidenced through changes in pharmacy education, expanding scopes of practice, and changes in government policy.⁴ In particular, pharmacy education has undergone drastic curricular reform over the past 15 years, with transitions from bachelor of science in pharmacy degrees to entry-level doctor of pharmacy degrees occurring across North America. The new degree designation marks an explicit movement toward graduating pharmacist clinicians. The driving force for this change is the desire to produce confident, competent graduates who are able to effectively contribute patient-centred services within the evolving health care environment, with these skills in place at the time of graduation and subsequent licensure.⁵ In 2010, the Association of Faculties of Pharmacy of Canada (AFPC) developed and approved a single set of educational outcomes for all entry-to-practice pharmacy programs in Canada,⁶ modelled on the CanMEDS competency framework of the Royal College of Physicians and Surgeons of Canada. The overarching goal of

these revised educational outcomes is to graduate “medication therapy experts”. The explicit use of the word “experts” implies that, upon completion of their education, graduates will have comprehensive knowledge and skills combined with experience in the practice of pharmacy. Furthermore, the accompanying AFPC “levels of performance” document states that at the time of graduation, pharmacy students will be “appropriately confident and capable of meeting the medication-related needs of both patients and populations”.⁷ In this vein, it would seem that the revised entry- to-practice curriculum is graduating pharmacists capable of practising in any health care setting. Of note, a significant change in the entry-level doctor of pharmacy curriculum that is now being implemented across Canada is the increased experiential education, particularly in the last year of study. This additional experience contributes considerably to the development of new graduates’ clinical judgment and confidence and reinforces the idea that residency training need not be mandatory. All of this is not to say that residency training is redundant or without benefit in the era of entry-level doctor of pharmacy programs, but it will need to be redesigned to ensure it builds on the skill set of this new breed of pharmacy graduate.⁸

Access to Residency Programs: Beyond the Hospital Site

Another issue to consider when debating the notion of mandatory residency training for hospital pharmacists is why this requirement should apply only to hospital pharmacists. As a profession, we have witnessed significant expansion of our scope of practice across the country, with many pharmacists now having independent prescribing authority. If the expectation is that pharmacists will work to their full scope, then all practising pharmacists in Canada—not just hospital pharmacists—should be able to provide comprehensive, patient-centred services for both simple and complex medication problems, in a timely manner, with a high degree of professionalism. In addition, it has previously been noted in this Journal that the boundaries between community and hospital practice have blurred recently as institutions strive to get patients back into the community as quickly as possible.⁹ This situation reinforces the point that if residency training is deemed mandatory for pharmacists to achieve a minimum standard before practising pharmaceutical care in a hospital environment, then the same would be required for the community pharmacists who will provide care to the same patients after discharge. In fact, one could argue that mandatory residency training is *more* important for community pharmacists, as their practice environments tend to be more isolated, with less opportunity for peer mentorship and team collaboration. In contrast, hospital pharmacists have greater access to peer mentors within the pharmacy department and within interprofessional teams in the hospital setting. With this in mind, there exist large numbers of pharmacists who would potentially require residency

training. However, a more reasonable approach is to ensure that the undergraduate pharmacy curriculum is in fact training future pharmacists with the appropriate knowledge, skills, attitudes, and behaviours needed to provide pharmaceutical care to all Canadians in the current health care climate, regardless of setting.

Supply and Demand

Last but certainly not least, if we are going to consider making pharmacy residencies mandatory for hospital pharmacy practice, we must seriously consider our capacity to do so. Currently, there are limited numbers of residency programs and positions in Canada.¹⁰ As noted in a previous Point Counterpoint debate in this Journal, the capacity of our training sites is clearly a “rate-limiting reality”.¹⁰ It would appear that our staffing and/or funding models for residency training in much of Canada have not been successful in growing the number of residency positions to meet the demands of graduating pharmacists, as evidenced by the surplus of applicants each year who go unmatched (personal observation). Without a formal mechanism to ensure availability and growth of suitable positions and programs, it is neither reasonable nor feasible to make such training mandatory for graduates. Going forward, residency master’s and/or clinical master’s programs that involve partnerships with universities may be a solution, but currently there is limited capacity in this domain as well. Until adequate capacity can be guaranteed, residency programs cannot be mandatory.

CONCLUSION

So, should it be mandatory for all hospital pharmacists to complete a PGY-1 residency in the era of entry-level doctor of pharmacy programs? Based on the arguments presented above, my answer is No.

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