

Position Paper on the Role of Hospital Residency Programs in Clinical Training and Professional Development in the Era of the Proposed Entry-Level Doctor of Pharmacy Program

Executive of the Hospital Pharmacy Residency Forum of Ontario

The following is a position statement of the Hospital Pharmacy Residency Forum of Ontario (HPRFO), the Ontario group that coordinates hospital pharmacy residencies in cooperation with the Leslie Dan Faculty of Pharmacy of the University of Toronto. This statement was adopted at the annual general meeting of the HPRFO in June 2005. This is not an official CSHP position statement, nor is it made on behalf of the Canadian Hospital Pharmacy Residency Board (CHPRB). However, the CHPRB is currently considering major revisions to the CHPRB Accreditation Standards for Pharmacy Residency Training in Canada (see letter to the editor on page 214). This position statement is being published in *CJHP* to begin frank and open discussions on this important topic.

ENTRY-LEVEL DOCTOR OF PHARMACY DEGREE

The move to the entry-level Doctor of Pharmacy degree in the United States has influenced Canadian faculties of pharmacy to move in that direction. While there are ongoing debates about the merits and potential benefits of the program, there is a realization that the practical experience component of such a program will be increased, particularly in the final year of study. The structured practical experience program (SPEP), the current experiential component of the undergraduate curriculum, ranges from 9 to 16 weeks and may be the only formalized clinical practice experience that a pharmacy student will have prior to graduation. Even with the current limited expectation, there have already been sufficient difficulties with securing placements that the Association of Faculties of Pharmacy of Canada (AFPC) struck a task force to

review the current status and identify means of facilitating the SPEP process. The task force made 36 recommendations, which will help facilitate the process as it currently exists and hopefully pave the way for a larger number of students who will require substantially more practical experience. This will be quite challenging for the present and foreseeable future, given the limited number of sites and the ever-increasing demand for these sites with the large class sizes in the current baccalaureate programs.

With this anticipated change, residency programs will also need to change to satisfy individual, professional, and societal needs. The opportunity that residency programs currently offer needs to be actively promoted within both academic and professional settings. Awareness of the benefits, as well as financial and philosophical support for programs, needs to be strengthened.

OBJECTIVE

In view of the changing educational milieu of pharmacy and the changing role of hospital pharmacists in the delivery of contemporary patient care, the Hospital Pharmacy Residency Forum of Ontario (HPFRO) executive has prepared this discussion paper concerning the role of hospital pharmacy residency training in Ontario. This white paper has been forwarded to the Canadian Hospital Pharmacy Residency Board (CHPRB) and the Dean of the Leslie Dan Faculty of Pharmacy to help integrate the plans for change to residency programs with change planned for the undergraduate curriculum. In the preparation of this paper, it was assumed that the entry-level degree for pharmacy in the future would be the Doctor of Pharmacy. The recent decision by the Quebec faculties of pharmacy to change to an entry-level program may indicate that this change will occur imminently. It is also assumed that students graduating from entry-level Doctor of Pharmacy (ELPD) programs would bring certain background skills to the residency (e.g., drug information, critical appraisal skills, clinical practice skills) that are perhaps less emphasized, or underdeveloped, in the current undergraduate curriculum.

BENEFITS OF A RESIDENCY PROGRAM

For more than 40 years, hospital residency programs have been offered in Ontario to graduate pharmacists who wish to pursue further training. The intent of these programs is to prepare the graduate for exemplary practice in the contemporary hospital setting. During the year-long program the resident is exposed to many areas of practice through various clinical rotations, and gains experience in areas such as administrative practice, education, and research activities. Under the direction of preceptors, the resident develops skills in time organization, self-directed learning, and research methodologies.

The success of many residency programs over the years is undoubtedly related to the efforts of the residents as well as the dedicated preceptors who devote their time to ensure a positive learning experience for the resident. The net effect of this collaboration is of benefit to a number of individuals as well as groups including the resident, the preceptor, the hospital, the Canadian Society of Hospital Pharmacists (CSHP) that oversees the program, the faculty, and, last but not least, the patient.

The resident benefits from both the additional training and the life experience. Particularly important is the strengthened experience in clinical practice, given the relatively short exposure to hospital practice prior to

graduation. Indeed, this aspect is the most sought-after aspect of residency programs.¹ While no other groups are available for comparison, in one survey more than 90% of respondents believed themselves to be competent practitioners after completion of a residency program.¹ Another survey of residents found that residents were more likely to be personally and professionally satisfied and contribute more to patient care than pharmacists who had not undertaken a residency.² When surveyed after the residency year, residents cited gains including improvement in problem-solving, interpersonal, and presentation skills. The majority were very satisfied with the knowledge gained. Perhaps the highest accolade from the first of these surveys, which involved more than 130 residents (of whom approximately 50% were from Ontario), was that all the former residents would recommend a residency program to a new graduate.¹

The residents also obtain leadership skills during their residency experience through their involvement in clinical, administrative, and research activities. Indeed, a recent study has suggested that “residency programs are a major means of developing and sustaining leadership for the growth of the profession”.³

Hospitals offering a residency program benefit in several ways. The program often attracts pharmacists, including past residents, who are interested in providing guidance to young residents during their residency year. Residents, in turn, may raise the profile of the department and are often involved in professional meetings as speakers and presenters. Another benefit, given the shortage of pharmacists and recruitment difficulties, is that hospitals with residency programs often retain residents once they complete their residency program. For example, at the London Health Sciences Centre in the last 10 years, a total of 36 residents have been enrolled in the program and in excess of 60% have been employed as pharmacists after finishing their residency.* Similar retention figures have been noted by other institutions including St. Michael's Hospital, where in excess of 50% of residents are recruited as pharmacists.† Hospital directors welcome applicants who have completed a residency, as it signifies a strong set of skills and knowledge.

The profession, particularly through CSHP, also benefits. Many residents first become involved in CSHP during the residency year and support their profession through volunteering for committee work, presenting at

*Charles D Bayliff, Residency Coordinator, London Health Sciences Centre, London, Ontario. Personal communication. May 2005.

†Henry Halapy, Residency Coordinator, St Michael's Hospital, Toronto, Ontario. Personal communication, May 2005.



major meetings, and contributing to the literature through publication of their practice experience and research efforts. Those individuals who undertook a residency were more likely to be involved in research and professional associations than were those who had not done a residency.² The value of residency-based projects is highlighted by the fact that for many years, the CSHP awards program provided national recognition of residents' contributions through the Organon Award. As well, several of the provincial branches recognize the value of residency programs through their own awards programs. The contributions of residents' abstracts to the meetings of CSHP and other professional organizations include numerous examples of award-winning residency projects.^{4,9} Indeed, many of the advances that have occurred in hospital practice can be attributed, in part, to the contribution of residents' projects.

The residency experience offers the opportunity for mentorship at a very critical time in professional development. While many of the mentor-mentee relationships occur informally, the Society has recognized the opportunity to provide mentorship to current residents by organizing a program for resident attendees at the Annual General Meeting to meet with current leaders in hospital pharmacy.¹⁰ The opportunity to participate in such a program was well received and its success is evident in that the program continues to be a feature of CSHP meetings.¹¹ Clearly, the opportunity for mentorship with all of its benefits can occur during a residency program.

The Leslie Dan Faculty of Pharmacy has supported the residency programs in Ontario throughout their existence. Formally, each program has a faculty member liaison, as well as a faculty member who participates in the HPRFO meetings. The dean signs completed residency certificates and the University of Toronto library catalogues copies of residency projects. These have recently become more readily retrievable through the University of Toronto database.‡ Residency program graduates are often recruited by Faculty of Pharmacy experiential and laboratory course coordinators to become preceptors and teaching assistants. In addition, the pharmacy resident participates in a number of educational venues including case presentations, in-services, and major didactic presentations. The Faculty of Pharmacy recognizes the preparedness for teaching that an effective residency can impart.

The advancement of direct patient care by residents is an important aspect of residency programs. Yoshida

reported that residents contributed substantially to positive outcomes for patients.¹² Furthermore, the residents did so in a very cost-efficient manner. While the 1 year of training is intended to provide the groundwork for residents to go into practice and perform effectively, residents improve outcomes even during their program.¹²

In recognition of the efforts and accomplishments of residents who complete a residency program, the CHPRB passed a motion in 2004 allowing residents to identify themselves with the designation of Accredited Canadian Pharmacy Resident (ACPR). This credentialing is noteworthy to recognize all the benefits that have been achieved through residency programs.

RECOMMENDATIONS

The HPRFO would like to explore the following potential changes to hospital pharmacy residencies in order to maintain the high quality of education offered by residencies. In general, the HPRFO and others believe that a greater emphasis on specialized clinical training will be necessary to support the training of future leaders in the pharmacy profession.¹³ With an ELPD program proposed, the current post-baccalaureate Doctor of Pharmacy program, an important avenue of pharmacy leadership training, may be phased out. Therefore, the goal for future residencies could be to provide the main mechanism by which advanced clinical practitioners and profession leaders/mentors are trained.

To accomplish the above goal and to increase clinical exposure, changing the composition of residencies should be considered. Currently, residencies are composed of 5 to 6 months of clinical training with up to 3 months devoted to project time. The remainder of the time is spent between drug information, administration, and pharmacy operations. This variety provides the resident with a solid overview of contemporary hospital practice and the skills needed to practice. More in-depth training, as the need for specialization dictates, could be obtained in select or specialized programs. Further, advancing skills such as teaching techniques during the residency program would enhance the role of residents as potential preceptors for undergraduate students. Indeed, without using residents in this capacity, the needs of an expanded undergraduate experiential program would not likely be met. Of note, in 1999 the University of Kentucky Pharmacy Residency Program initiated a Teaching and Learning Certificate Program for Pharmacy Residents. Based on the success of that venture, consideration could be given to adopting such a program in Canadian residencies.¹⁴

‡E Vitek, Pharmacy Librarian, University of Toronto, Toronto, Ontario. Personal communication, June 2005.



Improvements to the residency program could allow more time for clinical training as well as time for teaching skills to be included. A reduction of pharmacy operations time is supported by the results of a recent survey.¹ Residency projects have helped advance the profession, and the unique opportunities to participate in research endeavours that would not otherwise be readily available. That being said, an appropriate length of time for the residency project, while allowing for other activities, needs to be established. To facilitate this re-focusing of rotations, it is likely that some background skills currently taught in the residency (e.g., drug information, research, critical appraisal, and administration), may be captured in an ELPD program. Any of these suggestions can allow more time for residents to be “teachers” and to function as independent practitioners.

A close partnership with the Leslie Dan Faculty of Pharmacy is clearly required in redesigning the new residency curriculum. Objectives of the new residencies, besides being outcome-oriented and measurable, need to emphasize skills that a clinical leader/mentor of the profession would require. Residents will need to be taught how to be teachers themselves and how to function more independently (in a supervised setting). This is similar to teaching and clinical practice setups used by the medical model.¹⁵

As the profession of hospital pharmacy develops more specialized positions, the need for training in more specialized settings may be required. Streaming the residency to allow for emphasis on one type of practice or practice setting would be one way to meet those demands.

The increased need for hospital pharmacy preceptors, given increasing undergraduate enrollment and the proposed ELPD, will mandate a different use of available teaching and preceptor resources in the hospital setting. A resident who has had more clinical exposure and training would be able to assist in the teaching of undergraduate pharmacy students. This “stacked” approach to teaching has been used in institutions in the United States in response to increased teaching requirements of ELPD programs with considerable success. § Medical students have also been taught successfully in this manner. The experience the resident would gain from this teaching model would be invaluable for future growth.¹⁵

§James Tisdale, Henry Ford Hospital, Detroit, Michigan. Personal communication, September 2003.

SUMMARY OF RECOMMENDATIONS

- 1) Consider changes to emphasize in-depth clinical experience by increasing number and/or length of clinical practice rotations.
- 2) Consider changes to increase the involvement of residents in teaching. This may require a more formalized approach to teaching residents how to teach.
- 3) Allow residencies greater opportunity to stream or cluster rotations to emphasize certain practice settings over other types according to the candidate's preferences.

References

1. Moy D, Musing E. Canadian pharmacy practice residencies: learning needs assessment. *Can J Hosp Pharm* 2003;56:259-66.
2. Paradiso FL, Day JL, Muzzin L, Dasgupta J, Hornosty RJ, Bowen B. Hospital pharmacy residency programs: What is their worth? [abstract]. *Pharmacotherapy* 1992;12:258.
3. Pierpaoli PG, Flint NB. Residency training—the profession's forge for leadership development. *Pharm Pract Manag Q* 1995;15:44-56.
4. Macak I, Bayliff CD, Block GD. Surveillance of midazolam infusions in ICU. *Can J Hosp Pharm* 1995;48:218-23.
5. Barker SJ, Doig G, Rutledge F. The impact of evidence-based guidelines on drug utilization in the sedation of mechanically-ventilated patients [abstract]. *Can J Hosp Pharm* 1995;48:314.
6. Connelly S, Young D, Martin J, Zarnke K, Bayliff C, Delamere K, et al. Seamless care: evaluating the impact of a new discharge prescription form [abstract]. *Can J Hosp Pharm* 2003;56:65.
7. Rogers K, Tierney M, Singh A, McLean W. Assessment of a seamless care prescription/discharge notes form. *Can J Hosp Pharm* 2003;56:14-23.
8. Ma C, Eagleson A, Martin J. Use of a pharmacy care plan to improve continuity of care in dialysis patients [abstract]. *Can J Hosp Pharm* 1999;52:118.
9. Thompson C, Bayliff CD, Delamere K, Deshpande S. Intracerebral hemorrhage associated with phenylpropanolamine use [abstract]. *Can J Hosp Pharm* 1998;51:88.
10. Mann JL. Mentorship and leadership: the perfect complement. *Can J Hosp Pharm* 1998;51:101-3.
11. Battistella M. Residents enlightened through the mentorship program [letter]. *Can J Hosp Pharm* 1999;52:34.
12. Yoshida E. Workload and cost-benefit of hospital pharmacy residents. *Can J Hosp Pharm* 1993;46:147-54.
13. Bartle WR. A residency too short. *Can J Hosp Pharm* 1996;49:52-3.
14. Romanelli F, Smith KM, Brandt BF. Teaching residents how to teach: a scholarship of teaching and learning certificate program (STLC) for pharmacy residents. *Am J Pharm Educ* 2005;69:126-32.
15. Bartle WR. Graduating a more confident pharmacist: applying the medical model of training. *Can J Hosp Pharm* 2005;58:127-8.

Members of the Executive of the Hospital Pharmacy Residency Forum of Ontario for 2004/2005: Charles D Bayliff, Past Chair; Henry Halapy, Chair; Andrea Cameron, Faculty Liaison; Beverley Hales, Vice Chair; William (Bill) Wilson, representative of Canadian Hospital Pharmacy Residency Board; Toni Baillie, Secretary/Treasurer.

Address correspondence to:

Charles D Bayliff
London Health Sciences Centre
375 South Street
London ON
N6A 4G5

e-mail: charlie.bayliff@lhsc.on.ca

