

# Pharmacy Residents Developing Teaching Skills during the Pharmacy Practice Residency Program: A Closer Look at the Issue

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## ABSTRACT

**Background:** A 2003 survey revealed that 53% of pharmacy residents in Canadian residency programs had the development of teaching skills as a personal goal in undertaking the program, yet less than a third felt strongly that the program had helped them to achieve this goal.

**Objective:** To determine the extent to which clinical teaching opportunities are provided during the residency year and to obtain deeper insights (from the perspectives of residents, program graduates, and residency coordinators) into the role of such opportunities in developing teaching and precepting skills.

**Methods:** Recent graduates of a British Columbia (BC) residency program, residents currently enrolled in a BC residency program, coordinators of BC residency programs, and coordinators of other accredited Canadian residency programs were surveyed about various aspects of teaching and precepting. The surveys focused on graduates' current role as preceptors; training received in this area; residents' expectations, career goals, and interest in becoming preceptors upon graduation from the program; and approaches to the development of teaching skills in the various programs.

**Results:** Most of the recent graduates of the BC residency programs had become involved in precepting students immediately upon completion of the program, although they had received minimal or no training in this area. Of the 19 residents currently enrolled in the BC programs, 16 (84%) expected that their teaching skills would improve during the program. Only 6 (24%) of the 25 residency program coordinators who were surveyed reported that a teaching activity was incorporated in their programs. The nature, structure, and duration of these activities varied widely.

**Conclusions:** A national debate, involving all potential stakeholders, is needed on the issue of how best to develop pharmacy residents' teaching skills.

**Key words:** residency program, survey, teaching skills

## RÉSUMÉ

**Historique :** Un sondage mené en 2003 a révélé que 53 % des résidents en pharmacie, inscrits dans des programmes de résidence au Canada, avaient comme objectif personnel durant leur programme le perfectionnement de leurs aptitudes à l'enseignement, et que moins du tiers ont estimé que le programme les avait fortement aidés à atteindre cet objectif.

**Objectif :** Déterminer dans quelle mesure le programme offre des occasions d'enseignement clinique aux résidents au cours de l'année et mieux comprendre comment ces occasions (du point de vue des résidents, des finissants et des coordonnateurs de la résidence) servent à perfectionner leurs aptitudes à l'enseignement et au préceptorat.

**Méthodes :** Des récents diplômés d'un programme de résidence en Colombie-Britannique (C.-B.), des résidents actuellement inscrits à un programme de résidence en C.-B., des coordonnateurs de programmes de résidence en C.-B. ainsi que des coordonnateurs d'autres programmes de résidence canadiens agréés ont été sondés indépendamment sur divers aspects de l'enseignement et du préceptorat. Les sondages portaient principalement sur le rôle présent des diplômés comme précepteurs; la formation reçue dans ce domaine; les attentes, objectifs de carrière et intérêt des résidents à devenir des précepteurs à la fin du programme; et les méthodes menant au perfectionnement des aptitudes à l'enseignement dans les divers programmes.

**Résultats :** La plupart des récents diplômés des programmes de résidence en C.-B. avaient commencé à participer au préceptorat d'étudiants immédiatement après la fin du programme, malgré qu'ils aient reçu une formation minimale dans ce domaine, voire aucune. Des 19 résidents actuellement inscrits dans les programmes en C.-B., 16 (84 %) s'attendaient à une amélioration de leurs aptitudes à l'enseignement dans le cadre du programme. Seulement 6 (24 %) des 25 coordonnateurs des programmes de résidence qui ont été sondés ont déclaré qu'une activité d'enseignement était incluse dans leur programme. La nature, la structure et la durée de ces activités variaient grandement.

**Conclusions :** Un débat national faisant appel à toutes les parties prenantes potentielles est nécessaire pour déterminer le meilleur moyen de perfectionner les aptitudes à l'enseignement des résidents en pharmacie.

**Mots clés :** programme de résidence, sondage, aptitudes à l'enseignement

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## INTRODUCTION

In 2003, Moy and Musing<sup>1</sup> reported the results of a survey of 137 pharmacists who had recently graduated from Canadian hospital pharmacy residency programs. The survey was designed as a learning needs assessment of the pharmacy practice residency from the perspective of recent residents, to determine if the program was meeting their needs. The results of the survey provided valuable information and revealed strong resident satisfaction with the program. However, in that study, as well as in previous studies of US-based pharmacy residency programs,<sup>2</sup> residents identified teaching skills as an area they wished to develop through more exposure and practice.

When asked to identify any personal goals they had set for themselves before entering the program, 53% of the recent residency graduates surveyed by Moy and Musing mentioned the development of teaching skills.<sup>1</sup> However, less than a third felt strongly that the program had helped them to achieve this goal. In fact, when asked what they had to learn on their own once they were out in practice, many of the respondents mentioned teaching.\* Respondents had wanted the opportunity to work with students and to take responsibility for students' learning during their residency, yet the residency program had not given them opportunities of this type, despite the expectation from the profession that they assume the roles of teacher and preceptor for undergraduate students upon graduation from the program.<sup>1</sup>

On the basis of the survey results, Moy and Musing developed a set of recommendations focused on key areas of concern identified.<sup>1</sup> Included among these was a recommendation to offer clinical teaching opportunities for residents, such as working with pharmacy undergraduate students during the clinical practicum. They suggested that such initiatives might result in more effective future preceptors for the residency program, given that residents are expected to take on responsibility for students upon completion of the program.<sup>1</sup> These thought-provoking suggestions served as the springboard for a closer look at the role of the residency program in helping residents to develop teaching and precepting skills.

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\*D. Moy, Coordinator in Professional Practice, Leslie Dan Faculty of Pharmacy, University of Toronto. Personal communication, August 31, 2004.

## METHODS

### Survey of Recent Graduates of the British Columbia Residency Program

A written survey was sent to pharmacists who had recently graduated from the British Columbia Residency Program. The Faculty of Pharmaceutical Sciences at the University of British Columbia (UBC) assisted in compiling the names and e-mail addresses of pharmacists who had completed a residency in British Columbia in 2002, 2003, or 2004. A total of 55 graduates of the 6 residency programs offered in British Columbia during that period were identified and contacted by e-mail. The e-mail correspondence consisted of a letter describing the purpose of the survey and inviting participation. At 2 and 4 weeks after the initial e-mail distribution, a follow-up message was sent to those who had not responded, indicating that their responses had not yet been received and that their input would be valuable and requesting a response.

The survey consisted of 19 multiple-choice questions pertaining to various aspects of teaching and precepting, including how long after graduation from the program the respondents had become involved in teaching or precepting and the extent to which they were involved in these activities, their level of involvement with students, any reasons for lack of involvement with students, the extent and nature of any teaching or preceptor training they had received during the program or upon graduation from the program, and perceptions of the value of these activities. The respondents' perceptions of the importance of various skills acquired during the residency program were also ascertained. The survey captured demographic data such as year of graduation from the program, whether the residency had been completed at a teaching or a nonteaching hospital, and area of practice upon completion of the program.

### Survey of Current BC Residents

A survey was administered in person to the 19 residents enrolled in the BC programs in 2004/2005 during a group didactic session conducted in August 2004 (i.e., early in the residency year). This survey consisted of 16 multiple-choice questions that addressed the resident's demographic characteristics (year of graduation from undergraduate pharmacy program and any previous experience in teaching peers), their expectations of the program, their perceptions of the relative importance of the skills they would acquire during the residency, their career goals upon



completion of the program, and their interest in teaching or precepting students.

### Survey of Current BC Residency Coordinators

The coordinators of the 2004 BC residency programs were also surveyed by e-mail. A total of 8 coordinators (representing the 6 BC programs in operation at the time) were surveyed. The survey consisted of 17 multiple-choice questions. It solicited demographic information such as current job title, practice setting (teaching or nonteaching hospital), years of experience as a program coordinator, whether the pharmacy department trained undergraduate students during the residency year, whether any learning sessions conducted by pharmacists involved both undergraduate students and residents, and the department's perceptions on training residents as preceptors.

### Telephone Survey of Other Canadian Residency Coordinators

To obtain input on the topic from other Canadian residency program coordinators, results from the Residency Matching Service of the Canadian Hospital Pharmacy Residency Board (CHPRB) were used to identify the 25 accredited pharmacy residency programs that had been matched with residents as of March 2004 (out of 27 programs). The coordinator of each program was contacted by telephone to determine whether the programs provided opportunities for residents to develop teaching skills and how this was done or, for those that did not offer such opportunities, the reasons why and whether there was any intention to do so in the future.

### Analysis of Data

All of the data from each of the surveys were analyzed, but only those deemed most relevant to the issues addressed in this paper are presented and discussed here.

## RESULTS

### Survey of Recent Graduates of the BC Residency Program

The response rate for the survey of recent graduates of the British Columbia Residency Program was 67% (37/55). The demographic characteristics of the respondents and their areas of practice at the time of the survey are presented in Table 1.

Twenty-three (62%) of the 37 respondents stated that they had a role as a preceptor for undergraduate

**Table 1. Demographic Characteristics of 37 Respondents to a Survey of Residents who Graduated from British Columbia Residency Programs in 2002 to 2004**

Characteristic	No. (%) of Respondents
<b>Year of graduation from residency</b>	
2004	11 (30)
2003	10 (27)
2002	16 (43)
<b>Type of institution where residency was completed</b>	
Teaching hospital	32 (86)
Nonteaching hospital	5 (14)
<b>Current primary area of practice</b>	
Hospital pharmacy*	35 (95)
Clinical duties only	2 (6)
Distribution duties only	1 (3)
Clinical and distribution duties	30 (86)
Other	2 (6)
Community pharmacy	2 (5)
<b>Current involvement in teaching or precepting students</b>	
Yes	23 (62)
No*	14 (38)
Not in the job description	4 (29)
No opportunity yet	9 (64)
Not comfortable or confident with this duty	1 (7)

\*Percentages for subcategories are calculated on the basis of the number in this group.

students at the time of the survey. In describing this role, 11 (48%) of these 23 respondents indicated that they had begun precepting students immediately after completing their residency, and the other 12 (52%) had done so within 2 years of graduation from the program.

Only 13 (56%) of the 23 respondents with a role as a preceptor had received any training after program graduation on how to teach and precept students. Ten (77%) of these 13 respondents had received training in the form of a course offered at their institutions or a preceptor workshop organized by the BC residency programs, 5 (38%) had learned from observing or from discussing precepting skills with colleagues, and 3 (23%) had been given a manual. Three respondents had undergone more than one of these forms of training. Only 4 (31%) of the 13 respondents strongly or somewhat agreed that the training received had helped them in their role as preceptors. Ten (77%) of the 13 respondents suggested that learning teaching and precepting skills during the residency program would have been valuable.

To determine recent graduates' perception of the relative importance of skills in patient care, administration,



research, drug distribution, and teaching acquired during their residency (in terms of which skills the program should focus on, rather than relative importance in the respondent's current area of practice), respondents were asked to rank these on a scale from 1 (most important) to 5 (least important). Patient care skills were ranked as most important by 35 (95%) of the 37 respondents. Teaching skills were ranked as having a level of importance of 2 by 22 respondents (59%), 3 by 8 respondents (22%), and 4 by 7 respondents (19%).

### Survey of Current BC Residents

The response rate for the survey of residents enrolled in the BC residency programs in 2004 was 100% (19/19). The demographic characteristics of the respondents are presented in Table 2.

When asked to describe their "ideal job", 18 (95%) of the 19 respondents identified a job where they would have a role as preceptors. Sixteen respondents (84%) had the expectation that their teaching skills would improve during the residency program.

### Survey of Current BC Residency Coordinators

The response rate for the survey of coordinators of BC residency programs was 100% (8/8). The demographic characteristics of the respondents are presented in Table 3.

In describing the teaching and precepting conducted at their institutions, 3 (38%) of the coordinators stated that in some clinical rotations, the resident typically trained in the same clinical area and under the guidance of the same preceptor as another pharmacy trainee (e.g., an undergraduate student). Six (75%) of the coordinators noted that undergraduate students were invited (occasionally or always) to join in learning sessions conducted for residents. The coordinators felt that having students at different levels of training and knowledge participate in joint learning sessions contributes to a positive learning environment, is conducive to peer teaching, and helps to minimize the time required for teaching (by avoiding multiple sessions). Two coordinators felt that differences in learning needs, learning objectives, and knowledge base between undergraduate students and residents would hinder learning if learning sessions included both residents and students.

To determine coordinators' perceptions of the relative importance of the various skills that residents acquire during the program (patient care, administration, research, drug distribution, and teaching), they were asked to rank them from 1 (most important) to 5 (least

**Table 2. Demographic Characteristics of 19 Respondents to a Survey of Residents in British Columbia Residency Programs in 2004**

Characteristic	No. (%) of Respondents
<b>Year of graduation from faculty of pharmacy</b>	
2004	14 (74)
2003	1 (5)
Before 2003	4 (21)
<b>Prior experience teaching pharmacy student peers*</b>	
Yes	11 (58)
No	8 (42)

\*During an undergraduate pharmacy course.

**Table 3. Demographic Characteristics of 8 Respondents to a Survey of Coordinators of British Columbia Residency Programs in 2004**

Characteristic	No. (%) of Respondents
<b>Years of experience as coordinator</b>	
< 2	2 (25)
3-5	2 (25)
6-10	2 (25)
≥11	2 (25)
<b>Type of institution</b>	
Teaching hospital	6 (75)
Nonteaching hospital	2 (25)
<b>Type of students</b>	
Undergraduate	8 (100)
Doctor of pharmacy	7 (88)
Other	5 (62)

important) in the same manner as the residency graduates. Respondents identified patient care skills as most important, followed by (in descending order of importance) drug distribution, research, teaching, and administrative skills.

### Telephone Survey of Other Canadian Residency Coordinators

Six (24%) of the 25 coordinators of accredited Canadian pharmacy residency programs who were surveyed reported that a teaching or precepting activity was included in their programs. Among the 19 coordinators (76%) who reported that their programs did not include such experience, 4 noted that they would like to do so or saw a need to address such skills in their programs, but some were unsure of how this would be done. In one case, the faculty of pharmacy required students to be under the guidance of "experienced preceptors", but according to program



criteria, residents in the program were deemed unqualified to fulfill this role. Three coordinators reported that their programs had offered teaching or precepting opportunities for residents in the past but no longer did so; in these cases, the concern was the more urgent need to increase residents' exposure to patient care activities in the form of clinical rotations rather than spending time on other types of activities.

The nature, structure, and duration of the teaching and precepting activities varied widely across the 6 programs that addressed these skills. A total of 3 programs had either a mandatory rotation (2 programs) or an elective rotation (1 program) during which the resident would precept a pharmacy undergraduate student. There were many similarities in how these 3 programs structured their rotations, which ranged from 3 to 4 weeks in length. The goals for the rotations were similar and focused mainly on developing the skills necessary to precept, teach, and mentor an undergraduate student during the institutional rotation. Activities included reviewing the objectives and outcomes specified by the relevant faculty of pharmacy, developing a schedule for the student, creating specific learning objectives, assigning patient-specific duties to the student, providing feedback to the student, and maintaining records of precepting activities. Before the start of the rotation, the resident was required to discuss with his or her own pharmacist preceptor the specific skills that were to be developed, the learning activities that would be conducted to address these skills, and the resources that would be utilized. The resident was also asked to plan for the relationship between student and resident (as acting preceptor) in terms of time management, process for identifying student progress, and methods for motivating and encouraging the student. In preparation for the rotation, the resident was given reading materials from the faculty of pharmacy and/or attended a local preceptor workshop. The resident was expected to continue providing pharmaceutical care to assigned patients while in the preceptor role. The evaluation of the resident's performance during the rotation was based on feedback from the student and the pharmacist preceptor who oversaw the rotation. All 3 programs also required the resident to complete a self-assessment of their performance as preceptors.

An opportunity to teach undergraduate students or community pharmacists was offered routinely to residents in 4 of the 6 programs that incorporated a teaching or precepting activity, in the form of an elective activity (3 programs), a mandatory activity

(1 program), or an activity that would occur "whenever possible" (1 program). The elective opportunities involved teaching a drug-related topic to undergraduate students in pharmacy, medicine, nursing, or respiratory therapy. In the program where a teaching experience was mandatory, the resident had to plan, organize, and deliver an accredited continuing education session for community pharmacists. All program coordinators stated that the teaching experiences had always been very well received by the residents.

The types of training offered to residents in preparation for the activities described above included local preceptor workshops, reading materials on teaching and learning styles and the development of learning objectives, materials developed by local faculty for use in training preceptors, and assistance from the institution's education department.

## DISCUSSION

During the residency program, pharmacy residents have opportunities to teach a variety of learners: patients (e.g., through medication counselling), pharmacists (e.g., through case presentations), peers (e.g., through formal presentations), nurses (e.g., through in-service sessions), physicians and medical residents (e.g., through ward rounds or therapeutic discussions), and sometimes the general public (e.g., through community outreach presentations). Despite the resident's need to employ a wide array of teaching formats and strategies appropriate for these diverse settings and audiences, these opportunities do not allow residents to develop the skills necessary to precept a learner. This is because teaching is not quite synonymous with precepting, a view shared by the respondents to the surveys described in this report, as well as the CHPRB standards<sup>3</sup> and the respondents to Moy and Musing's survey.<sup>1</sup>

In British Columbia, recent residency graduates, residents enrolled in residency programs in 2004, and program coordinators all agreed that teaching (e.g., delivering a didactic session for undergraduate students on a specific topic) is only one part of the responsibilities of the newly graduated resident who is put in charge of precepting an undergraduate student upon entrance to practice. The more challenging parts are assuming responsibility for the student's learning, modelling how to prioritize a day's work while providing pharmaceutical care, handling issues or difficulties that arise in daily practice, providing feedback, and dealing with difficult students.

The responses to the BC surveys, albeit representative of only a small fraction of the programs in Canada,



raised the issue of whether the residency program should be viewed as an opportunity for residents to increase job readiness by developing their teaching and precepting skills.

This dilemma is not unique to pharmacy. A survey of US internal medicine residency programs revealed that only 20% of them featured activities intended to improve teaching skills, despite the fact that residents provided 62% of teaching to medical students at the bedside.<sup>4</sup> Although there are still very few medical programs that teach residents how to be teachers, initiatives designed to improve medical residents' teaching skills are taking a more prominent place in the educational literature.<sup>5</sup> For example, the Department of Pediatrics at the Massachusetts University Medical Centre developed a "Residents as Teachers" retreat that focused on clinical precepting skills, including evaluation and feedback.<sup>6</sup> The retreat was developed after recognition of the fact that residents are expected to teach and evaluate students, yet only few receive appropriate training. Although there are critical differences between medical and pharmacy residency programs, it appears that both types could benefit from a closer look at the potential benefits and drawbacks of developing these skills while the resident is still in training and how this could be done.

### Stakeholders' Expectations

The UBC Faculty of Pharmaceutical Sciences requires undergraduate students to give oral presentations to peers many times throughout the curriculum. In doing so, students develop learning objectives and provide feedback to one another. However, the curriculum does not give them any opportunities to develop the skills in teacher-student relationships that will be needed in pharmacy practice, specifically the ability to establish 2-way dialogue and verify that learning has occurred.

In the UBC Faculty of Pharmaceutical Sciences, the Structured Practice Education Program (which is responsible for undergraduate student clerkships) requires that practice preceptors be licensed pharmacists and have a minimum of 6 months of experience as practising pharmacists (among other criteria), but it does not have any requirements for teaching or precepting skills, nor does it have any teaching or precepting competency standards. Although a preceptor workshop is offered regularly to allow preceptors in the Structured Practice Education Program to learn about various aspects of teaching and precepting, attendance is not mandatory. The expectations of the College of Pharmacists of British Columbia for practising pharmacists are

similar. The only set requirements are guided by principles related to proper registration and licensing; teaching and precepting skills are not addressed, which exposes an apparent gap in the transition from undergraduate student to preceptor. Pharmacists who practise in the hospital setting are theoretically guided by CSHP's requirements that they "mentor students and other pharmacists" and that they be "involved with the education of students".<sup>3</sup> Interestingly, the CHPRB accreditation standards for residency programs includes the criterion that "the program shall provide opportunities to develop teaching skills in the resident", the word "shall" implying an absolute requirement.<sup>3</sup> Thus, even though little or no training in teaching and precepting is provided during undergraduate and residency programs and even though only some training of this type (and that of questionable value) is provided to hospital pharmacists by their employers as they start their jobs, the profession demands competent and skilled preceptors.

The results reported here indicate that, as of 2004, only 6 of 25 accredited Canadian pharmacy practice residency programs surveyed incorporated a teaching or precepting activity; in British Columbia, only 1 of 6 programs did so. This, combined with the questionable value of the training in teaching and precepting that program graduates receive from employers upon graduation from the residency program, leads to the question of who should assume the responsibility to train future preceptors: the residency programs, faculties of pharmacy, pharmacy licensing bodies, employers, or individual pharmacists?

### Design and Implementation of Teaching Activities

If the addition of a teaching or precepting activity to the residency program is to be considered, proper design and implementation are required. Although it can be argued that no brief experience during a residency can prepare the resident to fulfill the responsibilities of a preceptor, an activity that addresses ways to facilitate learning, the importance of both positive and negative feedback, and the manner in which to deliver feedback could result in program graduates being more eager and perhaps better equipped to teach and precept. It would be crucial, however, to design the activity in such a way that elements are integrated into (not added to) the residents' already-busy schedule. The ideal would be a resident-as-teacher activity incorporated into the resident's daily work, preferably during the last few months of the program, when the resident has already



developed patient care skills and knowledge. The planning and development of the activity may be best achieved by examining programs that already have a teaching or precepting component.

Although some view the residency program as the logical opportunity to expose residents to these skills, there are potential impediments. Time constraints in most programs mean that it is already difficult to schedule enough clinical rotations for residents to develop competency in patient care skills. However, as demonstrated by some of the 6 programs that already have a teaching or precepting component, it may be possible to incorporate such activities without allotting dedicated time, by finding “teachable moments or opportunities” that may currently be overlooked. These might be occasions when the resident takes charge of organizing and delivering a learning session for both residents and students. For example, the resident could be responsible for creating a set of learning objectives, developing a didactic session utilizing a variety of teaching styles, encouraging student participation (and hence 2-way dialogue and learning), and providing feedback to the student. The premise of this approach is that residents could develop some skills, strategies, and approaches to teaching and precepting as a head start for their future role as preceptors, without adding to their already overloaded schedule. In fact, any situation that involves both a resident and a student (e.g., the presence of both in the same clinical practice area and under the guidance of the same preceptor) may be an opportunity for the resident to develop teaching and precepting skills.

As became evident from the survey of BC residency coordinators, activities such as learning sessions with both residents and students, which some coordinators identified as conducive to a positive learning environment, are commonly encountered. There are also many occasions during the last few months of the residency program where a resident and a student could interact as “preceptor” and student, respectively, under the guidance of a hospital pharmacy preceptor, while both are training in the same clinical area. Thus, if the idea of addressing teaching and precepting skills in the residency program is to be embraced, it may be a case of simply taking advantage of existing opportunities.

### **Evaluation of Teaching Activities**

A teaching and precepting activity within the residency program should have a comprehensive evaluation system to provide feedback to the resident in his or her role as preceptor. An evaluation of the

activity itself would also be required and would be critical to determining which aspects of the activity, if any, improve job readiness. It would be wrong to assume, without proper evaluation, that addressing teaching and precepting skills during the residency will result in better future preceptors.

### **Perspectives on the Development of Teaching Skills**

The benefits and challenges of using peer teaching strategies have been extensively documented in the medical and nursing literature. Broschius and others<sup>7</sup> described a program in which senior students on a clinical unit acted as peer coaches to junior students. Evaluations by both groups indicated that the program reduced the anxiety of the junior students, improved their confidence, and enabled them to identify their learning needs, while senior students enhanced their leadership and patient management skills.<sup>7</sup> In a study of physiotherapy students randomly assigned to provide clinical services alone or with a peer, clinical competency was enhanced in the peer coaching environment.<sup>8</sup>

Ultimately, the case for addressing teaching and precepting skills during the residency program should be evaluated from various perspectives. From the perspective of the resident, the advantages of developing teaching and precepting skills during the residency program may include an enhanced learning experience, increased confidence, and better job readiness. From the perspective of the undergraduate student, the advantages may include a less intimidating and anxiety-provoking learning environment and a “teacher” (the resident) who can relate well to their needs. From the perspective of practising hospital pharmacists who regularly precept residents and students, the development of residents’ skills in these areas may reduce the pressure for the pharmacists to do all the teaching and may free up time for other duties. It may also result in residency program graduates who are more confident and capable of precepting once they enter practice.

The potential disadvantages should also be reviewed. From the perspective of the resident, unless the teaching and precepting activities are developed in a way that does not interfere with the resident’s exposure to patient care activities, the development of these skills could be viewed as reducing opportunities to learn clinical skills. In addition, some residents may view such activities as unnecessary and may feel that these skills will be developed sooner or later in the practice setting. From the perspective of the student, a potential drawback is that students may view residents



(i.e., their “preceptors”) as less knowledgeable or capable than practising pharmacists, an issue that could lead to problems in the teacher–student relationship. Finally, from the perspective of practising pharmacists, there may be a reluctance to let residents deal directly with students. A feeling of guilt for “not doing the job” or fear that the resident will teach the student “the wrong thing” may also hinder the process.

## Limitations

There are many limitations to the research described in this report. First, the built-in limitations of nonvalidated surveys, such as the potential for responder bias, the lack of demonstrable tool reliability, and the possibility of questions being misinterpreted, may have contributed to inaccuracies in the data. Second, some of the data collected relates only to BC programs; also, only the coordinators of Canadian programs that had been matched with residents as of March 2004 were surveyed. Including graduates of programs outside of British Columbia and coordinators of accredited residency programs that do not participate in the match (e.g., those in Quebec) might have altered the results. Finally, data collected in the survey of recent graduates was based on participant recall; for some respondents, 2 years had elapsed between graduation from the program and completion of the survey, which might have led to lapses in memory.

Despite these limitations, the research reported here should serve as a springboard for a further look at the issue of addressing teaching skills in the residency program. As it is, the residency program is a complex interplay between competing priorities and goals. This interplay needs to be discussed if the development of teaching and precepting skills and job readiness are to be improved. The fundamental issue is who should ultimately be charged with the responsibility of providing residents (and, for that matter, new pharmacists entering the profession) with the teaching and precepting skills they will need to successfully perform their duties upon entry to practice. The value of a national debate on this issue is unquestionable.

## Next Steps

There is no straightforward solution to the dilemma of whether to invest time and resources into creating new activities for residents or more skill development programs for pharmacists new to practice, such as preceptor workshops (and if so, how to do so). A

discussion forum should be undertaken to address the pros and cons of targeting these skills during the residency program versus during undergraduate training or upon graduation from any program. Such dialogue should include all potential stakeholders: CHPRB, residency program coordinators, graduates from the program, faculties of pharmacy, and licensing bodies. Regardless of whether consensus on this controversial issue is reached, such a forum may provide the basis on which to build strategies for improving all residency programs, as much learning is achieved when programs can share with others their successes and challenges alike.

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