

EXPERIENTIAL EDUCATION

A Collaborative Approach to Improving and Expanding an Experiential Education Program

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The lessons learned from a collaboration between a faculty of pharmacy and a practice site that involved implementation of an innovative experiential placement model are described, as well as the broader impact of the project on other practice sites, the faculty of pharmacy's experiential education program, and experiential placement capacity. The partnerships and collaborative strategies formed were key to the implementation and evaluation of a pharmacy student clinical teaching unit pilot program and integration of concepts used in the unit into the advanced pharmacy practice experience (APPE) program to enhance capacity and quality. The university-practice partnerships have made it possible to promote the delegation of responsibility and accountability for patient care to students, challenge the anticipated workload burden for preceptors, question the optimal length of an APPE placement, and highlight the value of higher student-to-preceptor ratios that facilitate peer-assisted learning (PAL) and optimize the practice learning experiences for preceptors and students. Collaboration in experiential education between universities and practice sites can provide opportunities to address challenges faced by practitioners and academics alike.

Keywords: collaboration, peer assisted learning, pharmacy, capacity, experiential education

INTRODUCTION

A key action proposed in the Canadian Blueprint for Pharmacy is to "increase the accessibility, quality, quantity and variety of experiential learning opportunities."¹ At the University of Alberta, experiential education accounts for approximately 20% (22/120 credits) of the 1 + 4-year curriculum and consists of a 6-week introductory pharmacy practice experience (IPPE) and 16 weeks of APPEs. Historically, the institutional component of the IPPE and APPE consisted of 2 weeks in the spring term at the end of the second year, and 6 weeks in the fall or winter term of the final year. The 6-week APPE was full time and a single placement, preferably scheduled in a patient care ward of either an acute care or long-term care facility. As the only university program in the province, the students at the Faculty of Pharmacy and Pharmaceutical Sciences have the opportunity to complete their placements at a variety of practice sites across Alberta. All preceptors for the IPPE and APPE program are volunteer faculty members. The ratio of students to preceptors was 1:1 for all but one of the institutional sites where it was 2:1.

Every year at the University of Alberta, finding sufficient placements to accommodate 130 students for both the 2-week and 6-week institutional placements is challenging. Although all students are eventually placed, the university spends a significant amount of time contacting individual sites to take more students. With the university pursuing establishment of a doctor of pharmacy (PharmD) program in addition to its baccalaureate program, expectations for experiential education will only increase.

A widespread problem and the most frequently cited concern of pharmacy program administrators is practice site capacity for experiential education programs.² In a survey by the American Society of Health-System Pharmacists, pharmacy directors indicated that finding time for pharmacists to serve and be trained as preceptors was one of their top challenges.³ The same concern about availability of time to spend with students to provide a quality experience was expressed by 20% of the volunteer preceptors responding to a national survey.⁴ In a survey of Canadian hospital pharmacy departments, only 13.9% were willing to provide more or longer practice experiences than were already offered.⁵

In 2008, the pharmacy management team of the Red Deer Regional Hospital Centre (RDRHC) approached the experiential education coordinator of the faculty of pharmacy about an opportunity to implement an innovative clinical teaching model for student pharmacists. The clinical teaching unit was a model for pharmacy experiential

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education to be implemented on an established general medicine ward of the 336-bed community referral hospital. The purpose of implementing the clinical teaching unit was to increase the student-preceptor ratio (ie, up to 6:1) by using several innovative approaches including peer-assisted learning (PAL) whereby students would “. . . help each other to learn and to learn themselves by teaching.”⁶

The design of the clinical teaching unit model and early outcomes from its implementation have been published.⁷ This paper describes the partnerships and collaboration that facilitated the implementation and evaluation of the clinical teaching unit pilot program and the faculty of pharmacy’s integration of principles from the clinical teaching unit model into the APPE program to expand capacity and enhance quality.

PLANNING AND DEVELOPMENT

The hospital created the clinical teaching unit to address its own student capacity concerns as the hospital tried to balance a pharmacy residency program, a strong clinical pharmacy service program, and requests for numerous student placements from across the country and abroad. The hospital pharmacy management team, which consisted of the hospital pharmacy site manager and clinical coordinators, had the idea for the clinical teaching unit, and involved representatives from the hospital’s nursing and research departments to assist them in developing the model. This included application for funding for the model totaling \$149,000 (CDN), which was secured from the Alberta Health and Wellness Workforce Action Plan-Building and Enhancing Clinical Capacity Fund in spring 2008.

After the model was developed and funding secured, the hospital contacted the university about the opportunity to implement and evaluate the model within the university’s experiential pharmacy education program. Because the timeline for completion of the project was 1 year, effective collaboration between the university and the hospital was essential.

A working group was established in summer 2008 that included 1 representative from the university (the experiential education coordinator for the faculty of pharmacy) and 4 representatives from the hospital (2 pharmacy clinical coordinators, 1 representative from nursing, and 1 from the hospital’s research department). A member of the clinical pharmacy management team was appointed project manager. The working group set project goals that considered the interests of all partners. The priority shared by all members of the working group was the quality of patient care and student learning experiences that the clinical teaching unit would provide. Mutually agreed upon terms of reference were established to guide the working group

and ensure representation and participation of all partners. For example, the university representative was required to attend all meetings to ensure that the concerns of the faculty of pharmacy were addressed. All representatives had authority to make critical decisions or obtain approval from hospital and/or university administration as needed to stay within project timelines.

The working group approved the course outcomes, student activities, and the processes to be used to evaluate the pilot program of the clinical teaching unit. The course manual consisted of a combination of the desired PAL skills based on evidence from the literature and the mandatory outcomes for APPEs established in the Canadian pharmacy accreditation guidelines. The experiential education coordinator and the hospital pharmacy’s clinical coordinator collaborated to select patient care activities that best supported the course outcomes and modeled the patient care skills used by preceptors on the general medicine ward.

IMPLEMENTATION OF THE PILOT PROGRAM

The clinical teaching unit project was implemented in winter 2009 on a general medicine patient care unit where pharmacists were well-integrated team members. The project consisted of a 9-week elective placement for 2 groups of 3 pharmacy students, with the second group starting the APPE 4 weeks after the first to provide a 5-week overlap during which both groups of students worked on the same patient care ward. Thus, the first group of students was able to mentor the second group of students.

A team of 3 pharmacists, who rotated through the general medicine ward in 3-week blocks, maintained their rotation schedule on the unit across the student placements, each in turn assuming preceptorship responsibilities for all students while providing patient care services on the unit. Therefore, 3 different pharmacists participated as preceptors and were able to provide feedback on the project.

Students were expected to assume responsibility for the patients who were assigned to them individually and to support each other in their development of patient care competencies and PAL skills. PAL incorporates social interaction in learning and improves the knowledge, skills, and attitudes of participants.⁸⁻¹⁰ Student activities were similar to those in the traditional 1:1 student-preceptor model previously used by the hospital whereby students worked independently and cared for individually assigned patients. However, it differed in that students also critically reviewed the work of their peers (including care plans) and participated in patient care discussions as a group.

In the clinical teaching unit model, more of the preceptor’s patient care load was delegated to the students

than in the traditional APPE model previously used. Preceptors were responsible for evaluating each student's performance and assigning a grade based on their achievement of specific course outcomes.

The pilot offering of the clinical teaching unit model allowed for greater development of student accountability and judgment skills without negatively affecting the workload of preceptors, and resulted in a 508% increase in patient interventions, confirming that students positively contributed to patient care.⁷ The primary factors that led to success as reported by students and preceptors included use of PAL, student-preceptor discussions, increased delegation of accountability and responsibility for patient care, and the extended length of the placement.

THE IMPORTANCE OF COLLABORATION

The partnership with the nursing staff of the hospital played an important role throughout the pilot program. The nurses were strong advocates for the acceptance of the clinical teaching unit model. After implementation, nurses were instrumental in ensuring work and meeting space on the unit for the students. Nursing staff members also identified strategies for incorporating groups of students into patient care activities, drawing on the experiences in nursing education.

Although not part of the working group, preceptors and students had shared ownership in the project as well. Besides their involvement with the clinical teaching unit, students and preceptors met weekly with the project manager to outline any concerns with the project and provide suggestions. For example, students reported the need for better printing capabilities to print patient profiles and forms and other documents that were used in patient care and for completing assignments. By having direct access to the project manager, students were able to have this potentially stressful situation resolved in a timely manner.

The experiential education coordinator also had the opportunity to meet with the students at the practice site at the beginning, midpoint, and during the final week of the elective course to monitor their progress and provide support as needed. In the APPE program, site visits by the experiential coordinator were often limited to those that involved resolving problems. However, the clinical teaching unit pilot program incorporated an expanded role for the experiential coordinator to have more direct contact with preceptors and students and this involvement enhanced communication and provided valuable insights into student and preceptor placement experiences.

Following completion of the pilot program, the working group assisted with dissemination of the outcomes through word of mouth and formal presentations, as well as through scholarly publications. Having representatives

on the working group from diverse professional backgrounds (education, pharmacy practice, nursing, and research) meant that each member could link with a different group of stakeholders. It also created the opportunity for collaboration among group members. For example, a student, a preceptor, and the experiential education coordinator gave a joint presentation on the clinical teaching unit model at the Canadian Society of Hospital Pharmacists Western Branches Annual Banff Seminar, allowing them to provide a comprehensive view of the innovation.

FACILITATION OF NEW PARTNERSHIPS

The ability to partner with additional institutional sites and thereby enhance the capacity and quality of the faculty of pharmacy's APPE program was one of the success measures established for this project. The successful partnership with the RDRHC was a catalyst for collaborating with other potential and existing experiential sites to explore the feasibility of integrating successful aspects of the clinical teaching unit model into their APPE settings.

Medicine Hat Regional Hospital

The most significant outcome from sharing our experiences with the clinical teaching unit has been collaboration with the Medicine Hat Regional Hospital, a 230-bed community hospital in Medicine Hat, Alberta. The management team at RDRHC made it possible for the clinical coordinator from the Medicine Hat hospital to visit the hospital in Red Deer and gain firsthand information about the role and activities of students and preceptors on the clinical teaching unit and to learn more about the components of the model.

The university and the clinical coordinator at Medicine Hat Regional Hospital collaborated in 2009 to establish an 8-week trial placement of APPE students with a 3:1 student-to-preceptor ratio. The patient care delivery model at this institution differed from that used in the clinical teaching unit model, but the principles of multiple students to preceptor, use of PAL, and daily preceptor-student discussion sessions were incorporated, while still meeting the needs of this institution. The new model increased the number of APPE students from 2 per year for 6 weeks to 6 students per year each for 8 weeks. As a result, APPE students have a sustained and collaborative presence on a specific patient care ward of the hospital. The increased number of students has also increased the ability for the hospital to provide patient follow-up care in the community. As was true at RDRHC, the nursing department at the Medicine Hat Regional Hospital was an important partner in advocating the involvement of pharmacy students in direct patient care roles.

Program Impact on Other Institutions

Prior to the clinical teaching unit pilot program at RDRHC, APPE programs in Alberta involved a 1:1 ratio at all but one institutional site. However, the clinical teaching unit pilot program provided evidence of the effectiveness of PAL from the perspective of students and preceptors. The preceptors were able to accurately assess the clinical reasoning and individual contributions of each student during discussions on patient care. Although the students and preceptors at the RDRHC preferred a higher than 2:1 student-to-preceptor ratios, other preceptors may have found such high ratios daunting, especially at first. Also, the sites may not have the physical space to accommodate larger numbers of students. Because of this, the university's initial goal was a minimum increase in student-to-preceptor ratios in APPE sites of 2:1.

Approximately 12 institutions across the province have partnered with the faculty of pharmacy since 2010 to adopt the 2:1 student-to-preceptor ratio. Institutions have also increased the length of experiential placements from 6 to 8 weeks, independent of the site's ability to increase the student-to-preceptor ratio. The decision for longer placements at experiential sites resulted in part from the findings of enhanced student contributions to patient care under the clinical teaching unit model, as well as from the faculty's and preceptors' need for students to accept more accountability and responsibility for patient care.

Community Pharmacy Corporate Partnerships

New partnerships were also established with corporate community pharmacy organizations impacting community placements. As an example, the Calgary Co-operative Association Limited partnered with the University to redesign the placement activities for a group of 3 students to enhance the students' involvement with the organization's specialized patient care services. Opportunities for PAL will be integrated across the first 2 weeks of the placements and during the students' involvement in specialty patient clinics. Tailoring the student's learning activities to the patient care model of the site was important to the success of the clinical teaching unit pilot program and has proven to be of value in our community partner settings.

University-Student Partnerships

In addition to the external partnerships described, university-student partnerships have also contributed to positive changes in the APPE program. Traditionally, the course coordinator of each of the IPPE and APPE courses established a student advisory committee each year to enhance communication with the class and to obtain student input into student matching processes and orientation. The student advisory committee was instrumental in inviting the students involved in the clinical teaching unit pilot program to talk with classmates about the benefits and challenges of the clinical teaching unit program at RDRHC. As a result of student promotion of the clinical teaching unit elective course, 16 students competed for 9 APPE positions created in the clinical teaching unit at RDRHC for 2009-2010. This was significant because it reflected the students' interest in the Clinical Teaching Unit model and was the first time this number of students had requested placement at a site outside of the 2 major urban centers in the province. The student advisory committee and the university also collaborated to create a new matching process for pairs or groups of students wanting to be placed together in the same rural community.

The partnerships described have contributed to changes that have enhanced the capacity and quality of experiential education at our faculty of pharmacy. The overall changes in capacity are outlined in Table 1. As a result of the changes in 2011-2012, 20% of the class had the opportunity to participate in peer-assisted learning during institutional placements, approximately 30% of the students could choose to complete an 8-week instead of a 6-week APPE, and nearly 40% of the class chose a rural placement match. The increase in the students' interest to select PAL opportunities in rural locations has paralleled the rural sites' preference for a higher student-to-preceptor ratio.

DISCUSSION

As described, partnerships have played a central role in the opportunities to enhance the capacity and quality of the APPE program at the Faculty of Pharmacy and Pharmaceutical Sciences at the University of Alberta. McWilliam, Desai, and Greig suggest that collaborative

Table 1. Changes in an Advanced Pharmacy Practice Experience Resulting From Implementation of Principles Learned From the Pilot Program of a Clinical Teaching Unit

Change	2008-2009	2009-2010	2010-2011	2011-2012
No. of students participating in an APPE with a \geq 2:1 student-to-preceptor ratio	2	14	23	25
No. of students enrolled in 8-week placements	0	6	34	37
No. of students selecting rural APPE sites for the following year	N/A	23/130	45/130	47/120

research partnerships between academia and practice are beneficial, but they also point to several challenges that should be taken into consideration.¹¹ They suggest that partners need to address factors such as differences in language, work timelines, and power. With respect to language, use of curricular and or research jargon or acronyms can be intimidating. Differences in work timelines can refer to a culture of immediate decision making for patient care actions versus the university's lengthy deliberations for curricular change. Fortunately, the structure of the APPE elective course had adequate flexibility for implementing the clinical teaching unit model within the funding agency's 1-year timeline. Power concerns need to be addressed to ensure a sense of ownership for all partners and equal distribution of decision-making authority. Multiple partners increase access to resources but can also complicate communication. Allocating time for project meetings and management is essential to keep everyone informed. The right partners, a mix of process and outcome skills, identifiable common goals, and a vested interest in the project are core strategies for building collaborative partnerships.¹¹

Fostering collaborative partnerships was key to facilitating changes in our APPE program. The benefits of the partnerships between academia and practice included the value of bringing multiple perspectives to an issue; the ability to access frontline knowledge of preceptors, clinical managers, faculty members, and students; the opportunity for the partners to invest in the process of change; and the ability to translate the results of the project into practical and appropriate interventions for multiple stakeholders. Both the American Association of Colleges of Pharmacy and the American Society of Health-System Pharmacists have recognized the need for experiential education partnerships between academia and practitioners to address issues of quality and capacity. Sixty-two percent of Canadian hospital pharmacy departments stated they are willing to work with academic institutions to develop new and innovative models of experiential training.⁵

SUMMARY

Open, transparent collaboration between multiple parties facilitated the success of the clinical teaching unit pilot program described here and continues to have implications felt in other aspects of experiential education at the university. The university-practice partnerships have made it possible to promote the delegation of responsibility and accountability for patient care to students, challenge the anticipated workload burden for preceptors, question the optimal length of an APPE placement, and highlight the value of higher student-to-preceptor ratios to facilitate PAL and optimize the practice learning experiences for preceptors and students. There is a greater awareness of

the potential for partnering with sites to design student experiences that can better meet the needs of learners, preceptors, and patients. Partnerships allow for local site needs to be addressed and can provide opportunities to address challenges faced by practitioners and academics alike. The university looks forward to ongoing collaborations with experiential education stakeholders.

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