

Advancing Experiential Learning in Institutional Pharmacy Practice: The University of British Columbia's AGILE Project

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Introduction

Experiential education describes an approach where educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values (1). In health care, direct exposure typically involves bringing learners into the clinical practice environment. This exposure is critical in cementing the practical and critical thinking skills learners need in order to develop into independent practitioners (2,3). While the benefits of experiential education in health care are well described, organizing and delivering placements may be associated with significant challenges for academic institutions and for practice sites (4). A shortage of preceptors and experiential sites is a common issue identified by academic programs, while practice sites and preceptors often describe challenges in managing teaching workload alongside existing workplace demands (4,5).

In pharmacy, experiential placements are typically offered in community practice settings and in hospital (or institutional) settings. The Canadian Council for Accreditation of Pharmacy Programs (CCAPP) requires a minimum of 16 weeks of experiential for degree programs leading to a Bachelor of Science in Pharmacy (6). Mostly, these placements are secured via a relatively informal request/offer system between faculty experiential coordinators and preceptors or sites. As above, availability of placements is at times an issue particularly for institutional placements. It is expected that the challenge associated with locating adequate numbers of placements will only intensify in the coming decade. A major reason for this is a shift in pharmacy degree programs in Canada. In 2011 all of the faculties of pharmacy in Canada agreed to pursue an entry to practice Doctor of

Pharmacy as the standard first-degree program in pharmacy in Canada. CCAP requires a minimum of 40 weeks of experiential placements in entry to practice doctor of pharmacy programs. This will amount to a doubling of the required amount of experiential time from existing Bachelor of Science in Pharmacy programs.

In British Columbia, the Faculty of Pharmaceutical Sciences will transition to its entry to practice doctor of pharmacy program beginning in 2015 or 2016. The current Bachelor of Science in Pharmacy program includes 20 weeks of experiential placements (4 weeks of which are institutional) (7). The new entry to practice program (currently in the planning stages) is expected to require over 40 weeks of experiential placements. Also, the Faculty recently increased enrolment in the Bachelor of Science in Pharmacy program from 165 students to 224 students starting in 2011. Both of these changes will place stress on placement capacity in BC. Anecdotally there appears to be an adequate number of community experiential placements to accommodate these changes. However, in the institutional setting it is clear that capacity will be an issue. An additional challenge in BC relates to the placement needs of the other pharmacy experiential programs.

The UBC Doctor of Pharmacy program admits 8 students annually who each require 12 one-month long placements (mostly in the institutional setting). In addition BC has a well-developed hospital pharmacy practice residency program administered by the health authorities. Over 30 pharmacy practice residents complete 8 to 9 one-month long institutional placements annually. The experiential needs of these learners can create competition for the limited institutional placement capacity in BC. At the same time there is great potential for mutual benefit and collaboration between the three

programs to enhance the experience of learners and leverage peer assisted learning. It is also clear that a comprehensive system of supports will be needed for both preceptors and learners. The faculty recognizes these challenges and opportunities and embarked on the AGILE project to further explore the possibilities.

Discussion

1. The AGILE Project

AGILE stands for Advancing Experiential LearninG In Institutional Pharmacy PracticE and was initiated by the Faculty of Pharmaceutical Sciences at UBC. The project falls within the Faculty's Practice Innovation portfolio. The goal of the AGILE project is to develop recommendations that will inform new approaches to institutional experiential pharmacy education in British Columbia and to address capacity concerns and associated challenges. The recommendations will pertain to several key areas as follows:

- Preceptor-learner models that can be tailored to the needs of specific sites
- Support structures for preceptors and learners during experiential placements
- Knowledge resources/faculty resources

- Preceptor training, credentialing, and incentives
- Role and job description of health authority/faculty educational support positions
- Roles and responsibilities of senior learners while supervising junior learners

The project began in November 2012 and will run for one year. A project lead was identified who was responsible for designing and executing the project methodology. One of the major aims of AGILE is to foster broad engagement of the many stakeholders involved in the pharmacy experiential education that occurs in BC's six health authorities. Key stakeholders across the province include health authority pharmacist-preceptors, coordinators, and directors as well as faculty and pharmacy learners. The feedback from these stakeholders will form the basis of AGILE's recommendations.

A one-year multi-phase approach for the project was outlined ([Figure 1](#)). Background research and planning, stakeholder engagement, analysis and reporting of recommendations were among the key steps identified in executing the mandate of the project. At the time of writing the project has just completed the stakeholder engagement phase (project phase 2).

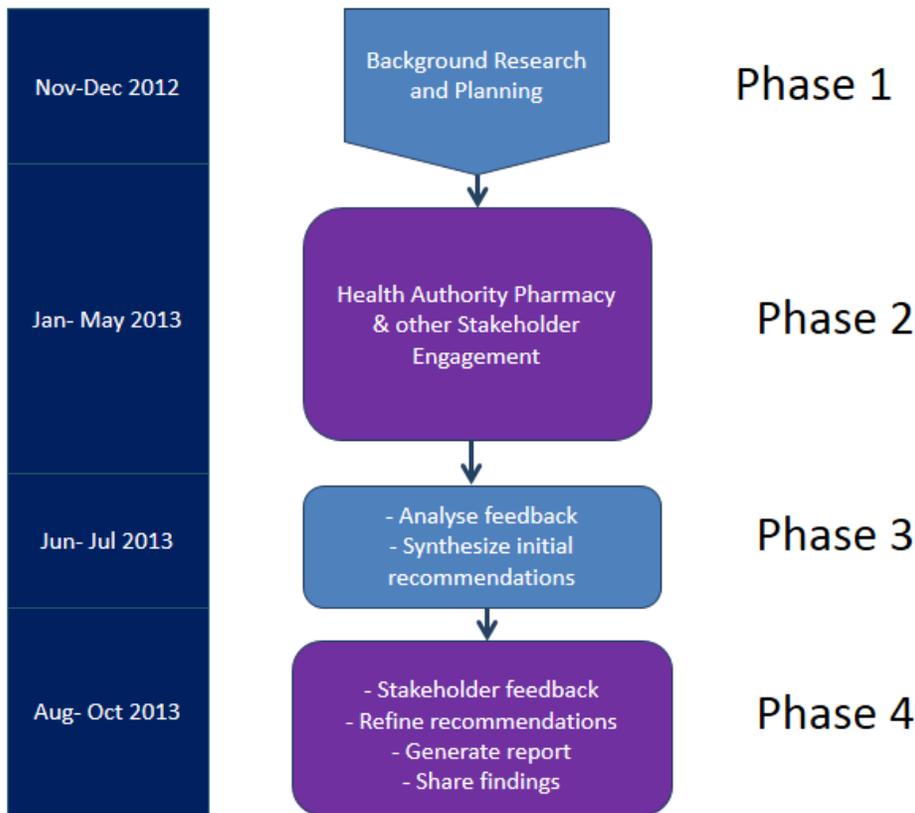


Figure 1. AGILE project - timeline and phases. The AGILE project was divided into 4 discrete phases in order to allow the project to complete all aspects of its mandate within the November 2012- November 2013 project term. Phase 2, Health Authority Pharmacy and Stakeholder Engagement, was the longest and most critical phase of the project. Phase 3 and 4 focus on developing the project recommendations (informed by the feedback obtained in Phase 2).

The AGILE project was fortunate to receive a significant funding grant from the UBC Teaching and Learning Enhancement Fund. This support allowed the project to employ 4 part time student assistants and a qualitative research associate. The students have been actively engaged in organizing site visits, focus groups and surveys. The qualitative research associate has already begun analyzing the stakeholder feedback.

II. Project Methodology

A comprehensive literature search, review of approaches used in other health care experiential programs in North America and the writing of a project protocol were the first steps. In order to capture and analyze feedback in a rigorous manner the project was designed to employ principles of qualitative research (8-11). A structured, scientific approach was chosen so that the project's findings could later be shared through scholarly publication and presentation. This is important because faculties and their institutional partners in other parts of Canada will face similar issues in the coming years. Sharing AGILE's findings will hopefully aid them as they implement their own program changes.

The stakeholder engagement phase of the project employed focus groups, in-depth interviews, electronic surveys and website discussion. The feedback obtained through these processes was captured as either audio recordings (which were transcribed into verbatim written transcripts), written field notes, or electronic data.

Analysis of stakeholder feedback is set to occur in the summer of 2013 and will identify key themes.

Reflections on the Process to Date

The literature search and review of approaches to experiential education elsewhere revealed a number of strategies worthy of consideration.

A important strategy for the sustainability of future experiential education relates to forming formal partnerships between universities and institutional sites (4,12,13). A partnership allows the university to have assurances of rotation supply and availability while the institutional sites benefit from logistic and direct support for learners on rotation and for preceptor development. Some perceived ingredients to successful partnerships were the presence of college faculty at practice sites, integration of students and residents into the site, and alignment of student roles with pharmacy department initiatives (14). In addition it is important to ensure that competing responsibilities and clinical workload of preceptors is considered in this equation.

A major strategy to increase capacity is the use of novel rotation models such as "multi-placements" and tiers. In pharmacy education the dominant

model is the 1:1 (preceptor to learner) model also known as the apprenticeship model. Several groups advocate adopting 1:2 or greater preceptor to learner models (multi-placements) or a tiered model (sometimes referred to as the medical model) where a senior learner supervisors one or more junior learner (15,16). There is little high quality evidence to guide the optimal choice of rotation model. A systematic review of the allied health literature which included mainly occupational therapy and physiotherapy studies concluded that there is no one model that is superior to another (17). However 1:2 and greater models seem to be viewed positively by learners and facilitate peer-assisted learning (17-19).

The literature also suggests that learners need be given real patient care responsibilities and should have some autonomy to learn (2-4). There is evidence that pharmacy learners can have a tangible impact on patient care by providing comprehensive care or by providing specific targeted services (20,21). Indeed there is a great potential for learners to contribute to meeting the profession's goals and improving patient care.

III. Stakeholder Engagement (Phase 2)

During the stakeholder engagement phase visits were organized to sites in all 6 BC Health Authorities. In addition, focus groups were conducted with 3rd and 4th year undergraduate pharmacy students, pharmacy practice residents, and doctor of pharmacy students. At the time of writing nearly 70 discrete meetings or site visits had been completed. Hours of recorded focus group discussion and field note documentation has been collected and analysis is planned through the summer months.

There was excellent participation by the health authority coordinators, preceptors, and pharmacy learners at all levels. It is clear that preceptors are committed to ensuring the success of pharmacy learners but more assistance in this endeavor is needed. Competing responsibilities, lack of physical space to host multiple learners at institutional sites, and the need to extensively orient undergraduate students were some major challenges identified by preceptors. Learners described a desire to feel better prepared for their institutional placements so that they can maximize the success of these placements. It is evident that small and large scale changes will be necessary to address the challenges facing pharmacy experiential programs in BC.

More detailed analysis of the stakeholder feedback will be required to identify a comprehensive list of challenges and workable solutions. This information will form the basis of the final project recommendations.

Conclusions

Experiential education is a critical component of pharmacy degree programs. In BC a proactive approach has been taken to respond to the challenges arising from program enrolment and curriculum changes. There is great potential to develop strong and mutually beneficial partnerships between health authorities and the faculty. These relationships should recognize the importance of experiential education and maximize the role of the learner as a practitioner while providing "on the ground" support for preceptors. It is clear that, while BC has some unique challenges, many issues will be common across the country. In fact a National Stakeholder meeting occurred in Winnipeg in November 2012 which identified a number of priority action items relating to pharmacy experiential education (22). It will be valuable to share the results of AGILE with other jurisdictions in Canada and work together to develop common strategies for the future.

References

- 1) Association for Experiential Education [Internet]. 2013 [cited 2013 Jun 24]. Available from: <http://www.aee.org/about/whatIsEE>
- 2) Rathbun RC, Hester EK, Arnold LM, Chung AM, Dunn SP, Harinstein LM, et al. Importance of direct patient care in advanced pharmacy practice experiences. *Pharmacotherapy*. 2012 Apr;32(4):88-97.
- 3) Hall K, Musing E, Miller DA, Tisdale JE. Experiential training for pharmacy students: time for a new approach. *CJHP*. 2012 Jul;65(4):285-93.
- 4) Rosenwax L, Gribble N, Margaria H. GRACE: an innovative program of clinical education in allied health. *J Allied Health*. 2010;39(1):11-16.
- 5) Cox CE, Lindblad AJ. A collaborative approach to improving and expanding an experiential education program. *Am J Pharm Educ*. 2012 Apr;76(3):1-5.
- 6) The Canadian Council for Accreditation of Pharmacy Programs. Accreditation standards and guidelines for the first professional degree in pharmacy programs [Internet]. 2013 [cited 2013 Jun 21]. Available from: http://www.ccapp.accredit.ca/site/pdfs/university/CCAPP_accred_standards_degree_2012.pdf
- 7) UBC Faculty of Pharmaceutical Sciences - clerkship descriptions [Internet]. 2013 [cited 2013 Jun 24]. Available from: <http://cpd.pharmacy.ubc.ca/content/clerkship-descriptions>
- 8) Pope C, Mays N. Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research. *BMJ*. 1995 Jul;311(6996):42.
- 9) Mays N, Pope C. Qualitative research: rigour and qualitative research. *BMJ*. 1995 Jul;311:109.
- 10) Kitzinger J. Qualitative research: introducing focus groups. *BMJ*. 1995 Jul;311(7000):299.
- 11) Britten N. Qualitative research: qualitative interviews in medical research. *BMJ*. 1995 Jul;311:251.
- 12) Smith KM, Phelps PK, Mazur JE, May JR. Relationships between colleges of pharmacy and academic medical centers. *Am J Health-Syst Pharm*. 2008 Sep;65(18):1750-4.
- 13) Murray TA, Crain C, Meyer GA, McDonough ME, Schweiss DM. Building bridges: an innovative academic-service partnership. *Nurs Outlook*. 2010 Sep;58(5):252-60.
- 14) Scheckelhoff DJ, Bush CG, Flynn AA, Myers CE, Kahaleh AA, Knapp KK, et al. Capacity of hospitals to partner with academia to meet experiential education requirements for pharmacy students. *Am J Pharm Educ*. 2008 Oct;72:1-20.
- 15) Johnson TJ, Teeters JL. Pharmacy residency and the medical training model: is pharmacy at a tipping point? *Am J Health-Syst Pharm*. 2011 Aug;68(16):1542-9.
- 16) Zellmer WA. Expanding the number of positions for pharmacy residents: highlights from the Pharmacy Residency Capacity Stakeholders' Conference. *Am J Health-Syst Pharm*. 2011 Oct;68(19):1843-9.
- 17) Lekkas P, Larsen T, Kumar S, Grimmer K, Nyland L, Chipchase L, et al. No model of clinical education for physiotherapy students is superior to another: a systematic review. *Aust J Physiother*. 2007;53(1):19-28.
- 18) Budgen C, Gamroth L. An overview of practice education models. *Nurse Education Today*. 2008 Apr;28(3):273-83.
- 19) Martin M, Morris J, Moore AP, Sadlo G, Crouch V. Evaluating practice education models in occupational therapy: comparing 1:1, 2:1 and 3:1 placements. *BJOT*. 2004 May;67(5):192-200.
- 20) Chase P. Rethinking experiential education (or does anyone want a pharmacy student?). *Am J Pharm Educ*. 2007 Apr;71(2):27.
- 21) Mersfelder TL, Bouthillier MJ. Value of the student pharmacist to experiential practice sites: a review of the literature. *Ann Pharmacother*. 2012 Apr;46(4):541-8.
- 22) The future of experiential education in Canada: a stakeholder workshop. Association of Faculties of Pharmacy of Canada [Internet]. 2012 Nov 16 [cited 2013 Jun 24]. Available from: <http://afpc.info/downloads/1/Report-experiential-education-workshop.pdf>