Implementation of a Student-Initiated Tri-Mentorship Program: A New Platform for Pharmacy Students to Connect with Hospital Practice, Research and Residency

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In June 2011, the Lower Mainland Pharmacy Services (LMPS) Residency Program (British Columbia) partnered with the University of British Columbia branch of Rho Chi, an international academic honor society in pharmacy, in launching the first year of Tri-Mentorship Program: Students Meet eXperts (TMP-SMX). This program was developed and initiated by two third year UBC pharmacy students who sought to enhance and formalize opportunities for exposure to hospital pharmacy practice.

Both students had participated in a variety of volunteer activities relating to ongoing pharmacy research at local hospital sites and various formal and informal shadowing and mentoring. The consensus among all participants was that student involvement was an extremely positive and valuable experience. These volunteer activities were mostly organized by the students themselves. The students felt that a more formalized system that facilitates the participation of greater numbers of students in this type of mutually beneficial arrangement was needed.

A review of the currently available programs in British Columbia revealed a variety of different programs outlined below:

**Canadian Society of Hospital Pharmacists – BC Branch Mentorship Program:** The program pairs undergraduate student CSHP members to hospital pharmacists (1). First year students are paired with dispensary pharmacists for an introductory overview of the medication distribution system. Second year students are paired with clinical pharmacists for pharmacists’ work up of drug therapies. Third year students are paired with residents to expose them to the residency program and evidence–based medicine. Fourth year students are paired with clinical specialists to learn about specialized practice. The program is completed through a half–day to a week of job shadowing.

**University of British Columbia (UBC) Faculty of Pharmaceutical Sciences Directed Studies Courses:** These research-focused elective courses range from supervised clinical research projects, development of patient education materials, to development of clinical technician training program and are directed by hospital clinical pharmacists. The course may be worth three or four credits over a school term. Enrollment in directed studies is limited to four to eight students per term.

**UBC Summer Student Research Program (SSRP):** This program takes place from May – August each year with a 3-month commitment. The nature of summer projects varies from laboratory-based research to interprofessional clinical research led by UBC Pharmaceutical Sciences Professors. The students receive ~$4,000 in financial support. Awards are made available to 10–12 students each summer, dependent on availability of research funding.

**UBC Structured Practice Education Program (SPEP) rotation in hospital:** All pharmacy students at UBC are placed in a four–week hospital rotation during their fourth year. Students participate in case work-ups and direct patient care in a hospital setting. These rotations usually provide limited exposure to clinical research and to advanced training programs such as the pharmacy practice residency.

The TMP-SMX founders sought examples in the literature of similar programs developed in Canada. They learned from the model designed in “Developing, Implementing, and Evaluating a Formal Pharmacist Mentorship Program” (2). The authors of this paper sought to develop a formal mentorship program for staff pharmacists who have not received further formal clinical training, such as hospital residency. Through the program, the authors wished to promote professional growth in clinical competency and therapeutic knowledge, as well as to increase job satisfaction and employee retention rate. The program consists of mentoring training workshops and learning modules, pre- and post-
training self-reflection exercise and a 12–month mentorship. The main role of the mentors is to help support the mentees in identifying learning objectives and action plans. The mentor-mentee pair also complete weekly activity logs. The program had three mentor-mentee pairs with bimonthly formal meetings.

Although the setting and target audience for TMP–SMX differs from that described by Nieuwstraten et al., we were able to adapt the aspects of peer-assisted learning and long-term experience (12 months) into our program (2). Additional goals we had were to provide more pharmacy research opportunities and also a shadowing and mentoring experience that covered a variety of practice settings and specialties. With these goals in mind, the TMP–SMX founders proposed the project to the Rho Chi UBC chapter advisor and the LMPS residency coordinator to outline the implementation of the program.

The TMP–SMX is a program that integrates mentorship, clinical practice, clinical research and residency (2). The term “Tri–Mentorship” refers to the three levels of participants that form the foundation of this program: principal investigators and resident clinical preceptors, resident, and the undergraduate student. Each undergraduate student is paired with one hospital pharmacy practice resident and assists with that resident’s research project. The resident serves as the student’s primary mentor and liaises between the student, the research team, and rotation preceptors. Residents are expected to obtain permission from their preceptors and arrange one shadowing session per rotation for the students if possible. Through this overlapping structure, it is hoped that students gain a broad learning experience while researchers benefit from additional manpower.

TMP–SMX is an optional program for Lower Mainland Pharmacy Services residents. Since the LMPS program begins in June, resident mentors are recruited as soon as the resident research project assignments are confirmed in July. During student recruitment, resident’s research project overview, elective rotations as well as pod assignments (Vancouver, Fraser, BC Cancer Agency, and Pediatric) are made available to the students online. The resident-student matching process mirrors that of hospital residency and takes place in July and August. Beginning in September, students start research training, rotation shadowing and attending presentations. Students are expected to commit six to eight hours weekly to the research project. However, the discussion time between the resident and the student are flexible and self-directed.

Advantages for the principal investigators include additional manpower to collect data and greater chance to detect significant findings through a larger sample size. Hospital clinicians are often limited in their capacity to conduct research due to time and funding constraints. TMP–SMX serves as a channel for researchers to connect with research students to help discover new knowledge that could benefit patient care. A potential downside of having multiple data collectors may be the introduction of confounding factors such as inconsistent data coding and interpretation. Thorough initial training, a clear definition of data collection parameters, contingency plans and readily frequent communication can minimize this risk.

Advantages for the residents include the opportunity to develop mentoring and coaching skills. The Tri–Mentorship program fulfills and compliments multiple LMPS residency objectives such as “demonstrate skill in the modeling form of practice-based teaching”, “demonstrate skill in the coaching form of practice-based teaching” and “completion of UBC Online Clinical Instructor Education Program” (3). Since our profession relies heavily on experiential learning, and preceptors can greatly impact the learning outcomes, it is imperative that residents develop their teaching skills as they mature professionally. Furthermore, residents benefit from reflection and strengthening of their own learning through verbal discussion with the students. This also complements the purpose of an online ePortfolio. Although residents would be required to dedicate time outside of residency to meet and train the mentees as well as arranging shadowing sessions, it is our hope that the resident’s time would be compensated through the research work contributed by the mentee.

The advantages to students are many-fold. Through TMP–SMX at no cost, student mentees are able to obtain a structured and comprehensive overview of various pharmacy specialties through rotation shadowing throughout the year. Students are also encouraged to discuss and learn from the resident’s experience with the Pharmacy Residency Program, in addition to hands-on participation in clinical research. In addition, starting in 2012, students were invited to attend various resident case presentations and didactic teaching sessions throughout the year. Through the development of a committed relationship with the resident, the students would have a supporting channel to connect and explore the world of hospital pharmacy.

TMP–SMX is currently in its second year. The number of Tri–Mentorship pairs has increased from three in 2011 to eleven in 2012. Informal feedback from student mentees from 2011 was positive and all expressed that having gone through TMP–SMX has motivated or confirmed their interest in pursue a career in hospital pharmacy. They were able to outline the daily activities of a clinical pharmacist and a resident and briefly describe the medication distribution system in the hospital. They also
appreciated the challenges of clinical studies, such as small sample size and low response rate. Students were able to identify practice issues to their clinical pharmacist, such as patient load, time, and challenges to residents; this includes steep learning curves, balancing between pre-readings, presentations, and projects.

Currently, undergraduate students have ample exposure to community pharmacy practice through volunteer, work experiences and UBC internship placements in second year and third year. TMP–SMX helps to promote hospital pharmacy and awareness of hospital residency while broadens the students’ exposure to different career pathways of pharmacy. This provides the students with the opportunity to better plan and utilize their undergraduate years, regardless of their career goals.

We believe that this type of student-led Tri-Mentorship model could definitely be implemented elsewhere, especially by students who later become residents themselves. The marriage of a pharmacy school club and a hospital pharmacy practice residency program makes a sustainable platform for shadowing and research assistance. The recent consolidation of the hospital pharmacy practice residencies into one program in British Columbia’s Lower Mainland under a single program coordinator facilitated the implementation of the TMP–SMX program. A large number of residents and sites with central coordination eliminated some of the barriers to implementing such a program. The authors suggest a thorough assessment of the local resources be conducted prior to implementing a program such as this. This will help to avoid duplication of programs. The integration of this program with a school club was also critical in making pharmacy students aware of this opportunity. In addition, having residents involved with advertising to their fellow residents and managing TMP–SMX on the residency end of things allowed for better integration and expansion of the opportunities available to students. Lastly, seeking advice from faculty members and residency program coordinators contributed to the success of the TMP–SMX program.

While not every student will be able to participate in such program, every spot counts.

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References


