

International Exposure to Pharmacy Leadership, Education and Practice: The Early Qatar Experience

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Abstract

Introduction: The College of Pharmacy (CPH) at Qatar University (QU) offers international experiences for Doctor of Pharmacy (PharmD) students from North America. The objective of these rotations is to provide students with exposure to pharmacy practice and education in a progressive Arab country.

Design: Each internship consisted of 5 core components: i) Qatar national priorities, strategic planning, and educational system; ii) academic leadership; iii) student instruction; iv) project, and; v) pharmacy practice.

Evaluation: Since 2010, eleven students from three universities have successfully completed elective experiences. Students consistently rated rotations highly in terms of organisation, unique experiences, and exposure to faculty with diverse backgrounds. Additional benefits to the host and parent colleges included student exchange, programme development, research collaboration and recruitment.

Future Plans: International experiences have been well received and will continue to be offered in order to broaden student perspective of pharmacy education and practice in the Middle East.

Keywords: *Academic leadership; cultural exchange; international pharmacy practice; PharmD internship.*

Introduction

Students completing Doctor of Pharmacy (PharmD) degrees from programmes accredited by the Accreditation Council for Pharmacy Education (ACPE) in the United States or the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) in Canada are required to complete introductory and advanced practical experiential training. PharmD students in ACPE-accredited programmes are expected to complete 36 weeks of advanced experiences, while those in CCAPP-accredited postgraduate programs are expected to complete a calendar year of practical experiences (Accreditation Council for Pharmacy Education, 2011; Canadian Council for Accreditation of Pharmacy Programs, 2006).

While international experiences are not explicitly required by ACPE or CCAPP, both refer to the need for competency in a culturally diverse setting (Accreditation Council for Pharmacy Education, 2011; Canadian Council for Accreditation of Pharmacy Programs, 2013). International experiences are recognized as an excellent opportunity for students to address this competency, to learn about global health challenges, and to experience pharmacy education and practice in a different setting (Werrenmeyer, 2012).

To provide opportunities for experience in an international setting, several North American PharmD programmes offer elective international experiences to their students (Werrenmeyer, 2012; University of South Carolina, 2013; Creighton University, 2013; Gourley *et al.*, 2013). Despite the availability of international experiences, the prevalence of United States (US)

students studying abroad while still enrolled in a US college of pharmacy appears to be low (Mashburn & Brown, 2000). International experiences are also available for Canadian students, however the prevalence of international experiences undertaken by these students has not been published.

To address the need for international experiences and to promote student exchange, the College of Pharmacy (CPH) at Qatar University (QU) has recently begun to offer internships for PharmD students from partnering Canadian and US institutions. In this paper we describe our initial experience with this new program.

Description of Course and Assessment

Educational Environment

Qatar is a progressive and politically stable Arabic country located in the Middle East. Qatar has a population of 1.8 million, and over 80% are expatriates from around the world (Qatar Statistics Authority). The national vision of this country rests on four general pillars (human, social, economic and environmental development) and the education and health care sectors are undergoing rapid and positive change to address this vision (General Secretariat for Development Planning, 2008). Public health care in Qatar is primarily staffed by health care professionals trained outside Qatar, however the country also wishes to establish a domestically-trained workforce to deliver health care to its residents (National Health Strategy, 2013).

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Until recently, Qatar relied entirely on internationally trained pharmacists for the nation's health care workforce (Kheir *et al.*, 2009). To address this shortcoming, the QU CPH was established in 2006 to provide domestically-trained pharmacy graduates. The college currently offers a BSc (Pharm) degree, a Doctor of Pharmacy (PharmD) degree and a MSc (Pharm) degree. The BSc (Pharm) programme received full accreditation by CCAPP (Canada) in June 2012, while the Doctor of Pharmacy programme received full accreditation in December 2013 (Qatar University, 2013).

Program Description

Qatar University CPH began offering international experiences for PharmD students from select US and Canadian programmes in October 2010. These experiences are currently offered to PharmD students attending universities with a formal clinical training or student exchange agreement with QU. Each experience lasts four-six weeks and is awarded at least four credit hours towards the student graduation requirements. Upon placement, our college arranges for student visas, airport transfer, housing, and daily transportation. Visiting students live in university dorms with local students from QU.

Each experiential rotation is organised by one or two primary faculty preceptors with contributions from several other faculty members and practitioners from partnering institutions. The primary preceptors are responsible for organising and scheduling student activities in advance of the rotation, reviewing goals and objectives with students upon arrival, facilitating student activities in collaboration with other contributing faculty members, and completing formal midpoint and final evaluations.

Expected Outcomes and Learning Objectives

Each internship consisted of five primary components: i) Qatar national priorities, strategic planning, and educational system; ii) academic leadership in an international setting; iii) undergraduate and graduate instruction; iv) administrative or research project(s), and; v) local pharmacy practice (Table I). Each component has a variety of learning objectives and the cognitive domain for these objectives spans from knowledge (*e.g.*, familiarity with Qatar characteristics) to evaluation (*e.g.*, rating the educational system in Qatar).

Projects and exposure to local pharmacy practice are tailored to address individual student interests. Students participate in a number of additional unique activities based on time of year. Examples of these unique activities include participation in the annual CPH White Coat ceremony, attending and participating in regional scientific conferences, and attending local continuing professional development events.

To support the learning objectives set for this experience, students are also provided access to a variety of learning resources and interact on a daily basis with multiple pharmacy stakeholders including faculty administration,

core clinical faculty, adjunct faculty, undergraduate and postgraduate pharmacy students, and local pharmacists. To further diversify each student's culture experience, a number of social activities to local attractions were organised during evenings and weekends. The university housing arrangement also provided students with many opportunities to learn more about Middle Eastern culture through social interactions with local university students.

Student Learning Outcome Assessment

The primary preceptors are responsible for assessing overall student learning outcomes with solicited input from faculty and partners involved in the experience. Each contributing faculty member provides feedback as to whether the student has met the learning objectives relevant to the assigned activity.

The primary preceptors review the student performance evaluation form with the student at evaluation meetings scheduled at midpoint and at final week of the rotation. Students also receive oral and written feedback on their performance at completion of each individual activity by the assigned faculty mentor.

Student And Preceptor/Site Assessments

The primary preceptors seek informal input from each student regarding the quality of the experience on an ongoing basis. Formal experience and preceptor assessments are also completed by each student by the end of the rotation using a written evaluation form supplied by the student's parent college. This form is reviewed by the primary preceptors and the student at the final evaluation meeting. During the final evaluation meeting, preceptors also review the activities completed, confirm that the planned learning objectives were met, and identify possible ways to further strengthen the rotation for future students.

Follow Up Assessment Survey

In addition to the standard evaluations completed at the end of the rotation, former students were also invited to complete an online survey to evaluate student perceptions regarding the quality of experience and its anticipated perceived impact on practice. Invitations were sent to all students who had completed the international rotations. The 19-question survey was constructed using SurveyMonkey® and was based, in part, upon a previously published report by Gourley *et al.* (2013). The institutional review board at QU reviewed this survey and provided exemption from full ethical review (QU-IRB 227-E 2013).

Evaluation

During the first 17 months since the launch of this initiative, a total of 11 PharmD students from three Canadian (University of British Columbia) and American (Xavier University and Purdue University) programmes were placed in the international experience programme.

Table I: Internship Outline and Student Activities

Domain	Specific Learning Objectives	Activities	Student Assessment and Cognitive Domain
Qatar national priorities, strategic planning and educational system	Be able to describe and summarize the general attributes of Qatar including the culture, geography, the national vision, national development strategy, and the national health strategy	Compulsory: Discussion sessions with the Dean and individual faculty members; review of required reading Optional: Discussion sessions with university administration	Student assessed by individual faculty on basis of preparedness, understanding of reading materials, quality of responses to questions posed, caliber of questions asked by the student. Aggregate assessment undertaken by primary preceptor on basis of faculty input.
	Be able to describe and summarize the evolving conditions of secondary and post-secondary education in Qatar including the findings of the Rand-Qatar Policy Institute		
	Be able to describe and summarize pharmacy education in the Middle East		
	Be able to describe undergraduate and graduate pharmacy programs at QU and contrast these to western standards		
	Be able to describe and summarize how this academic unit delivers and manages courses and how it assesses learning outcomes		
	Be able to describe and summarize student recruitment admission and retention policies and procedures within the college		
	Be able to describe and discuss faculty recruitment and retention at the college		
	Be able to describe and discuss online learning systems		
Academic Leadership	Be able to describe the concepts of transformational leadership and the attributes of a leader in pharmacy education and practice	Compulsory: Discussion sessions with the Dean and/or individual faculty members	Student assessed by individual faculty on basis of preparedness, understanding of reading materials, quality of responses to questions posed, caliber of questions asked by the student.
Undergraduate and Graduate Student Instruction	Be able to describe small group learning, large classroom teaching, student assessment and experiential training	Compulsory: Participate in 4 discussion sessions with faculty members Optional: Participate in additional discussions about various teaching topics based on student interest	Student assessed by participating faculty who contribute to the discussions on basis of preparedness, understanding of reading materials, quality of responses to questions posed, caliber of questions asked by the student.
	Be able to prepare and deliver quality undergraduate course lectures in a Middle East academic environment	Compulsory: Deliver one formal therapeutics lecture and one interactive case-based seminar to undergraduate pharmacy students in a regularly scheduled class setting Optional: Peer teaching review or develop a written or oral examination	Student assessed by assigned faculty member using a standard QU graduate student teaching evaluation form adapted from the QU faculty assessment tool and developed for the purpose of the rotation.
		Compulsory: Observe and participate in the teaching of undergraduate and graduate (PharmD, MSc) students in a variety of instructional settings Optional: Participate in patient role play during interactive classes or assessments and provide student feedback on practice-based scenarios	Student assessed by faculty members based class preparedness, degree of class participation, and interactions with local students.
	Be able to deliver a quality research seminar in a Middle East academic environment	Compulsory: Present a research or clinically oriented seminar to students and faculty during weekly faculty research seminars or faculty development seminars Optional: Participate in a continuing professional development seminars or a preceptor development workshops	Student assessed by the primary preceptor based on content and delivery of the seminar and the students' ability to respond to questions from the audience.
	Be able to participate in therapeutic discussions with local PharmD students in collaboration with clinical and faculty preceptors at clinical experiential sites	Compulsory: Complete formal therapeutic discussions or review patient cases with local PharmD students completing experiential training with partnering institutions	Student assessed by the primary preceptor based on contributions to the discussions and communication with the local students and preceptors.
	Be able to actively participate in on campus discussion sessions with local PharmD students in a classroom setting	Compulsory: Attend a minimum of two on-campus learning sessions with local PharmD students	Student assessed by faculty members based class preparedness, degree of class participation, and interactions with local students.
Project	Be able to conduct a research, teaching, or administrative project in a Middle East academic environment	Compulsory: Completion of a research, teaching or administrative project with intention to submit for peer reviewed publication Optional: Peer review a journal article under the guidance of a faculty member	Student assessed by the assigned faculty member based on student understanding of the project including objectives, design, statistical analysis, and results and their ability to accurately and efficiently complete assigned tasks.
Pharmacy Practice	Be able to describe the general healthcare system in Qatar	Compulsory: Off-site clinical orientation with practicing hospital or community pharmacists Optional: Other activities as identified by the student based on personal learning objectives such as: attendance of continuing professional development events (off and on campus) and meeting with pharmacy directors and national regulatory personnel	Students assessed by the primary faculty member based on their ability to describe the general health care system in Qatar and outline the role of the pharmacists within the health care system.
	Be able to describe the relationship between this academic unit and our professional practice partners in Qatar		
	Be able to describe the characteristics of the pharmacist licensing and registration system in this country		
	Be able to describe major impediments to advancement of pharmacy practice in this country and describe how these can be addressed		

Forty-eight student-experience weeks were completed and all students were considered to have achieved the learning objectives. During this period, the students completed eight formal oral presentations, 13 guest lectures, three research posters that were presented at international conferences, and two manuscripts that were submitted for publication in peer-reviewed pharmacy journals (Black & Wilby, 2012; Black *et al.*, 2013; Cartwright *et al.*, 2013). Since the introduction of these international experiences, three of the visiting PharmD students from Canada (including two co-authors on this manuscript) have also been recruited to the college and are now employed as professors in the clinical pharmacy and practice section with cross-appointments to the local hospitals.

All students completed the required formal written rotation evaluations and exit interviews at the completion of their rotation. The verbal and written assessments completed over the past two years were consistently positive. In the written evaluations, students “strongly agreed” or “agreed” to all positively worded statements on the evaluation forms and were uniformly complimentary about the rotation organisation, being able to achieve their personal goals and expectations, the workload and assignments, the diverse experiences and finally, the commitment and enthusiasm of the college faculty, students and partners that they met and interacted with during the rotation.

Follow-up Assessment Survey

Eleven (100%) former students responded to the June 2013 survey. Respondents had completed their rotations from three to thirty-two months prior. Eight (73%) were completing Canada-based PharmD degrees at the time, while three (27%) were enrolled in US programmes. Five (46%) were working (or planned to) in Canada after graduation, while the balance were locating in Qatar (36%) or the USA (18%). Student evaluation of the rotation by domain is outlined in Table II. Ten (91%) respondents agreed or strongly agreed that the experience in Qatar made them more sensitive to the diverse needs of patients and pharmacy practitioners, contributed to their development as a pharmacist, and helped them gain skills that they would not have gained otherwise. Nine (82%) believed that the international experience had a positive effect on their ability to perform in their current professional practice position. Eleven (100%) respondents agreed or strongly agreed that the rotation positively affected their career path and also increased their interest in academia. Ten (91%) of these respondents recommended that all pharmacy students participate in an international pharmacy practice experience if possible.

Future Plans

Our early experience with international internships at QU suggests that these have been well received by the participating foreign PharmD students. Since the introduction of this novel initiative, international student

Table II: Follow-up student evaluation

Student evaluation by domain	Percent rated as good or excellent
<i>How would you rate your exposure to each of the following....</i>	
Qatar national priorities, strategic planning, and education system?	100
Academic leadership and the attributes of a leader in pharmacy education and practice?	100
Exposure to undergraduate and graduate student instruction?	91
Research, administrative, or teaching projects?	100
Pharmacy practice in a Middle Eastern environment?	55

experiences at QU have evolved into a multi-component experience that have served to enhance the student’s understanding of pharmacy education and practice in a safe and progressive Middle Eastern country, and they have provided these future pharmacy practitioners with a diverse and positive exposure to another culture.

In addition to the benefits derived by the visiting students, anecdotal evidence suggests that these experiences have also been advantageous to local students and to the parent and hosting institutions. Local students benefit through direct student interactions and gained insight into pharmacy education and practice in a North American environment. In our experience, exposure to education and practice in a foreign environment increased student interest in academic and international career opportunities that may not have been previously considered. As described by Baia and Strange, participation in the actual delivery of university courses may also help to direct students towards a career in academia (Baia, 2012). Finally, parent and hosting institutions also benefit in a number of ways including programme development, student exchange, research collaboration, and recruitment.

Organising international experiences in a Middle Eastern environment for international PharmD students was not without challenges. To prepare and deliver these rotations, a significant time commitment from faculty and staff at the CPH was required to deliver a comprehensive experience. In addition to the traditional activities associated with planning and delivery of any structured PharmD experience, the college also needed to address inter-institutional agreements, student visas, funding and related issues. Accommodation in a local student residence is graciously provided by the university at no charge. Air travel and meal costs are borne by the students (with or without support from their host institutions). The university also provided ground transportation by shuttle bus between the student residence and university.

Based upon the early success of this initiative, the college wishes to expand the availability of international

experiences for PharmD students. The college expects to expand the number of partnering institutions involved and further develop bilateral student exchange arrangements to permit QU PharmD students to benefit from experience in a North American environment. To date, Xavier University (New Orleans, Louisiana) and the University of South Carolina (Columbia, South Carolina) have hosted Qatari students.

Considering the increasing mobility of pharmacy graduates worldwide, we encourage other pharmacy programmes to offer international experiences for their students, and to provide local experiences for foreign students. This will no doubt better prepare the students for enriching careers as future practitioners, educators and researchers, and it will encourage international collaboration for the benefit of the student, the partnering institutions and the profession in general.

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