

## Factors Influencing Students' Preferences to Pursue International Advanced Pharmacy Practice Experiences

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### ABSTRACT

**The Problem:** To improve the quality of the international APPE program and facilitate growth, a questionnaire was developed to identify perceived barriers for selection of and ways to increase interest in international APPEs. **Survey Design:** A questionnaire was administered to two consecutive third-year classes to gauge interest, perceived barriers and possible facilitators for engagement in international APPEs. **Key Findings:** Cost and need to travel independently were most frequently identified as barriers to participating in international APPEs. Suggestions to increase participation in international APPEs include: schools of pharmacy actively developing funding support, pairing students for international APPEs, and earlier targeted marketing.

**Keywords:** international, experiential education, advanced pharmacy, practice, experience

### DESCRIPTION OF THE PROBLEM

Despite a substantial number of student pharmacists electing international advanced pharmacy practice experiences (APPEs) each year at UW-Madison School of Pharmacy, participation has plateaued at around 16%. In an effort to stimulate increased growth of the international program, we aimed to investigate potential facilitators and barriers. This paper demonstrates application of the principles of continuous quality improvement (CQI) to the management of international APPEs.

The School of Pharmacy has offered international APPE rotations for over a decade. Since the first student completed an international APPE in 2006, approximately 150 students have completed elective APPE rotations in eight countries on five continents. In each of the APPE sites, international preceptors have been identified and have completed preceptor training.

In the fall of each year, a one-hour colloquium is held to provide third-year student pharmacists information regarding international APPEs including details about the rotation site, transportation and housing, and approximate costs. Shortly after the colloquium, applicants are vetted through an established process and are required to attend a one-day orientation program during Spring Semester to prepare them for international travel and the in-country experience. Over the past five years, the percentage of fourth-year students completing international APPEs has remained relatively stable

at 15-16% of the total class. Even though this percentage is relatively high by national pharmacy standards (approximately 6% across the US), the potential for additional growth of the program is of interest.<sup>1</sup>

There are several important reasons for encouraging pharmacy student participation in international learning. The majority of international APPEs offered by UW-Madison School of Pharmacy focus on providing students a comparative systems perspective and opportunities to learn about strategies for health system strengthening, consistent with the International Federation of Pharmacists (FIP) vision of improving health systems globally.<sup>2</sup> This comparative systems perspective is best accomplished through global work, where students are able to practice in another health system and navigate daily life as well. Additionally, comprehensive study abroad experiences enhance students' ability to perform in situations of ambiguity, which pharmacists face daily.<sup>1</sup>

In an effort to improve the quality of the international APPE program and to facilitate growth, faculty of the Office of Global Health developed a questionnaire to identify perceived barriers for selection of and ways to increase interest in international APPEs.

### QI SURVEY DESIGN

A questionnaire was developed and administered to two, consecutive third-year classes to gauge interest, perceived barriers and possible facilitators for engagement in international APPEs. Question items were generated by the UW-Madison School of Pharmacy Global Health Directors based on their experience in advising students and through literature review.<sup>3-4</sup> The completed questionnaire was reviewed for understanding by a third investigator.

The first question asked students if they decided to complete a fourth-year international APPE. Students who indicated

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affirmatively were asked to rank five possible reasons for their decision to apply (see Table 1). Students were also given the option to rank and describe “other” reasons in an open-ended text box. Students who applied for international APPEs were also asked if they had considered barriers to studying abroad and were asked to describe, using an open-ended text box, the barrier/s and what assisted them in making the decision to apply.

Students who did not apply for an international APPE were asked to rank eight possible barriers and facilitators for completing an international APPE (see Table 1). Students were also given the option of choosing an “other” reason for their rankings and provide this information in an open-ended text box.

Regardless of whether they were completing an international APPE or not, students were asked if there were other countries of interest. Students who responded “yes” to this question were prompted to write in recommendations in an open-ended manner. Depending on the response to the first question, there was a total of six or seven questions asked on the questionnaire, which generally took respondents less than 10 minutes to complete.

The questionnaire, administered using Qualtrics (Qualtrics Labs Inc., Provo, UT), a web-based survey software, was sent to two consecutive third-year classes during the Spring semesters of 2016 and 2017. The email soliciting the participation was sent by a Global Health Director and no course credit or extra credit was given for survey completion. A link to the questionnaire was sent via email with a reminder email two weeks later.

Descriptive statistics were used to summarize the responses by summing the proportion of students who chose each reason as their first or second choice and the proportion of students who recommended expanding international APPEs. Written open-ended responses regarding barriers to international APPEs and international countries of interest were reviewed and totaled. This project was undertaken for programmatic evaluation; it was determined not to meet the federal definition of research and IRB review was not required per the Institution’s IRB Not Research Determination Decision Tool.

Of the 252 students who were invited to complete the questionnaire, 100 gave usable responses (overall response rate 40%). Of these, 28 applied for an international APPE. One student who initially applied for an international APPE did not complete the rotation. As this student indicated interest in an international APPE at the time of questionnaire administration, they were categorized as having applied for an international APPE.

Of the 28 respondents who applied, the primary reason for interest was to experience another culture (Table 1). Of these 28 students, 23 considered barriers to going abroad (82%). Cost was noted by 21 students as the primary barrier (91%). Another common barrier considered among the students who ultimately applied for an international APPE was tight scheduling for travel around rotations and additional coordinating for meetings and residency interviews (8 students). Less common barriers included being away from family and friends for an extended period of time (3 students) and language barriers (2 students). As a description for how they overcame the cost and family barriers, most students cited that the opportunity to study abroad was unique, and they might not get another similar chance in the future. As a strategy to overcome scheduling limitations, students described being strategic in the selection and timing of their international APPE. No explanation was given on how to overcome the language barrier.

For the 72 respondents who did not apply for international APPE rotations (Table 1), 61 (85%) reported that cost was prohibitive. Several of students reported that if traveling with a fellow student were an option, they would have been more likely to apply (n=21, 29%). Of the 13 students who gave “other” reasons for not applying for an international APPE rotation, family responsibility was the most common reason (n=6, 46%).

Of the 100 students completing the questionnaire, 45 recommended other countries; many students suggested more than one country. The most common countries were European sites including: Germany (n=8), Spain (8), France (7), Italy (6), Switzerland (5), and Scandinavian countries (Sweden, n=6 and Norway, n=4). This response was followed by interest in the Americas: Canada (n=9), and Latin America (n=10).

#### EXISTING KNOWLEDGE/CRITICAL ANALYSIS

This survey identified motivations for and against applying for international APPE rotations. The barriers and facilitators identified offer tangible solutions for future development of sites and marketing of international APPEs. The highest reported barrier was the cost, which can be addressed through the development of funding support and encouraging early financial planning. The most common facilitator was traveling in pairs, which can be addressed through coordination with international preceptors.

The concern regarding financial barriers is consistent with other surveys looking at students’ interests in studying abroad.<sup>1,3-5</sup> Traditional means of taking out additional student loans is often not an attractive option. To offset some of the costs, schools may consider other ways to support student travel. Sustainable philanthropic support, in the form of an endowed fund for students pursuing international rotations, can assist with partial funding for travel. To grow such funding,

schools of pharmacy may consider working with the school's or university's foundation. There may be potential for alumni to sponsor students, and in return receive reflections or updates from students, demonstrating their personal and professional growth. Alternatively, alumni or interested parties, may prefer to donate airline miles to offset travel expenses.

Equally important to fundraising is empowering students with real examples on how to save to finance their travel expenses.<sup>5</sup> The UW-School of Pharmacy Office of Global Health advisors starts conversations about the cost of these trips early on during their first year to help students budget and allocate discretionary funds towards planning for their international APPE (Table 2). For example, if the average cost of a trip is an additional \$3000, this correlates to saving approximately \$20 a week for three years.

Students indicated preference to travel in pairs. Although not specifically asked to state a reason for preferring to travel with a partner, there may be concerns for personal safety.<sup>3</sup> Currently, UW-Madison School of Pharmacy has three international APPE rotations that can accommodate pairs of students for the six-week international APPE rotations, and advertisement of this option may raise interest. Schools of pharmacy could work with their international preceptors to ascertain capacity and interest to host more than one student at a time.

Another common concern for students was scheduling around rotations and residency interviews. One suggestion to overcome this barrier that can be shared with students is to contact residency directors prior to the international rotation and schedule interviews at a mutually agreeable time. In addition, students who are concerned may consider focusing on rotations offered during other times of the year.

Students were asked about additional countries of interest for international APPEs. Based on questionnaire results, there was a trend towards expansion of sites to Europe, as well as Central and South America. Further investigation into collaboration with Canadian partners may be beneficial, given the proximity and general use of English.

Although language barriers might inhibit student pharmacist participation in international rotations, this was not a barrier frequently identified in this survey. Currently, only one rotation site has a requirement for student pharmacists to speak a language other than English. For that site, interested students undergo a language exam to evaluate proficiency. There are several limitations to this evaluation. This was a small survey of two classes at a single institution. To enhance this evaluation, serial surveys, across several years, would provide a more comprehensive list of facilitators and barriers

to participation. Additionally, this questionnaire was created and reviewed by faculty involved in global health and experiential education, but was not piloted by students prior to dissemination. Piloting with students may have identified additional questions. However, students did have the opportunity to submit "other" facilitators and barriers outside of the list provided.

Future directions include implementation of the proposed interventions to decrease financial burden, to increase options for traveling in pairs, and to monitor the effectiveness of these changes on students' perceptions of barriers and facilitators for selecting international rotations.

### KEY FINDINGS

This questionnaire identified cost as the primary barrier to applying for an international APPE. For students who applied, the benefits of exploring pharmacy practice and another culture overcame this barrier. For students who did not apply, cost was the most common reason and an important facilitator was the opportunity to travel with another classmate.

Information garnered from this questionnaire may be beneficial in several ways. More targeted and frequent marketing during the first year of the program may assist students in understanding the value of an international APPE, as well as ways to finance this opportunity. Additionally, sharing information earlier about the potential for traveling with a partner may be beneficial for some students.

**DISCLOSURES:** None

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**Table 1. Barriers and Facilitators to Completing an International APPE**

<b>Reasons for deciding to apply for an international APPE (n=28)</b>	<b>Chosen as 1<sup>st</sup> or 2<sup>nd</sup> reason; n (%)</b>
I wanted to experience another culture	22 (78.6)
I wanted to see how pharmacy was practiced in another country	20 (71.4)
I wanted to travel outside of the United States	7 (25.0)
I am interested in studying abroad to gain self-confidence	5 (17.9)
I feel studying abroad will increase my likelihood of obtaining the job/residency I wish to apply for after graduation	2 (9.1)
<b>Barriers and facilitators to completing an international APPE among students who did not apply for an international APPE (n=72)</b>	<b>Chosen as 1<sup>st</sup> or 2<sup>nd</sup> option; n (%)</b>
The trips are too expensive	61 (84.7)
I would apply if I were matched with another student whom I could travel	21 (29.2)
The countries where current opportunities exist are not of interest to me	17 (23.6)
I do not perceive any value added to studying abroad apart from what domestic rotations can offer	15 (20.8)
Other (family, did not feel like it, wanted experiences they could apply to career)	12 (16.7)
I or my family had concerns over personal safety and health	8 (11.1)
I wished to be present as the ASHP midyear conference to help with my decision on residencies	7 (9.7)
I would apply if the experiences were faculty led (i.e. the faculty will travel with you)	2 (2.8)
I or my family had concerns over the political climate in the country of choice	1 (1.4)

APPE-Advanced Pharmacy Practice Experience

**Table 2. UW-Madison School of Pharmacy Global Health Advisor's Suggestions for Student Financial Planning**

- Use websites that help students find ways to save money during college. (e.g. FORBES, mymoney.gov)
- Track expenses for a month to assess spending patterns and cut back in those areas that are not essential (e.g. eating out, high end coffee drinks)
- Encourage students to look at the entire package of the trip. For many international APPE sites, the cost of the airplane flight may seem daunting, but once in country, the cost of living is reasonable, and may be less expensive than closer, seemingly less expensive sites.
- Forgo spring break or another trip to save for the international APPE
- Volunteer at functions that offer free food in order to save on the monthly food bill