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VIEWPOINT

Creating Global Experiences With Local Impact for Pharmacy and Medical Students

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INTRODUCTION

Since the definition of global health by Koplan et al., global health initiatives, experiences, and education in the health care professions have been on the rise.[1,2]

In 2013-2014, more than 50 out of 133 accredited pharmacy institutions offered experiential opportunities or a global health-related elective course to their students. The experiential opportunities, which could be clinical or nonclinical, were mainly in the form of advanced pharmacy practice experiences, mission trips or service-learning opportunities.[1] In a study by Steeb et al., 64% of eligible schools "offered at least one of 67 different countries and territories."[3] Although the opportunities spanned a variety of geographic locations, the greatest concentration of these experiences were in East Asia.[3] Furthermore, they identified that 6.1% and 13.1% of the graduating class of 2014 participated in an international advanced practice experience and focused course offering, respectively.[3] Conversely, a summary report of US medical school students by the Association of American Medical Colleges in 2014 and 2015 revealed that 29% and 31.2%, participated in global heath experiences, respectively, as opposed to 30.8 % in 2010.[4] There is also growing interest for resident physicians in family medicine, internal medicine, and pediatrics both in the United States and Canada. Up to 67% of pediatric residents and 51% of surgical residents surveyed reported that they selected programs based on the international elective programs offered.[5] Generally, the hope is to improve global citizenship, increase cultural awareness, sensitivity, develop new ways of thinking, and expand on their world view, as well as to provide innovative solutions and systems approaches to current local challenges with similar cultural constructs and barriers.

Given the increasing demand for international experiences by pharmacy students at several schools, the question remains how to ensure adequate quality of all experiences including international opportunities. In essence, will this kind of rotation and experience make them "practice ready" or should the outcomes of international experiences be focused primarily on the medication use system? Do we have enough experiences to satisfy the demands from various schools across the academy? [6,7] The Accreditation Council for Pharmacy Education has clear criteria (Standard 13:1-8) on what advanced pharmacy practice experiences should include and allows elective offering designations for experiences outside the United States and its territories.[8] For graduate medical education, several barriers to increasing the availability of international rotation experiences have been identified and several potential solutions have been proposed. Some barriers include significant variability in the expectations of each clerkship experience, inadequate numbers of international experiences to satisfy the current demands, a mismatch in expectations of a new resident and experiences available. Included in this list of ideas are establishing core competencies, allowing bilateral exchanges so as not to oversaturate the clerkship assignment system, and allowing the resident to have completed a year of training before participating in an international experience.[5]

Clearly, quality international rotations or experiences are critical to creating global citizens in the

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professions of pharmacy and medicine. To accomplish this, several steps need to be taken as summarized in the review of current practices by Alsharif et al. [9] They surmised that there are a variety of home/host country and site/institution considerations to consider. There are several things to consider that are related to the country where students may travel: communications, passport requirements, visa requirements, airline travel, international student identity card, safety issues, identifying a point of contact in the host country, determining housing and in-country transportation options, tracking travel alerts and warnings, identifying health-related issues and alerts, and financial considerations.[9] The site/institution considerations include vetting the site/institution for a concrete opportunity that will allow the student to learn, providing standard site descriptions for interested students, establishing quality indicators based on the home sites' values, policy and accreditation standards, establishing a memorandum of understanding on what is expected from all parties involved in the partnership, clearly explaining expectations from the site experience for the student, and how assessment will be done after the experience concludes.[9]

To get through all these details, it is paramount that a good relationship or a strong collaborative agreement in the context of strong professional relationships is in place. Trust can only be built with careful consideration of expectations, culture, resources, deliverables, and outcomes. Dornblaser et al. further explained this in their review of preceptor and student considerations for setting up global/international advanced pharmacy practices.[10] It is important to make sure the preceptor has the needed qualifications to deliver the training or experience to meet prestated standards.[8] Additionally, the liaison between either institutions or sites must clearly state the preceptor's responsibilities and desirable qualities and undergo preceptor development and assessment; the student must clearly understand the learning outcomes, objectives, and performance activities expected for the experience, be culturally sensitive and prepared for the rotation experience.[8] Certain skills and attitudes are needed for a student to adequately prepare for and have a successful experience on an international rotation. Some of the desired attributes of a preceptor include the ability to practice ethically, demonstrate compassion toward patients, document outcomes, collaborate with health care professionals, facilitate individual, personal, and group learning, advocate for others, problem solve based on evidence, and critically think and educate professionals students and patients. Many students expect a preceptor to be able to teach, to be kind, and to inspire and model the way in practice-based experiences. They also appreciate the opportunity to complete tasks that the preceptor would do under supervision with appropriate coaching and timely feedback after the exposure or experience. Liaisons at host and home institutions can assist the student in making decisions about which clerkship experiences to apply for by being clear about the opportunities available at each school and the details it offers.

For example, the University of Maryland School of Pharmacy offers several international rotations that are available for students in their final year of pharmacy school. Rotations are available for a limited number of students in Australia, South Korea, Peru, Puerto Rico, and Thailand. There is space for about 2-4 students to travel per country annually. The experiences have provided opportunities for students to observe and participate in health care delivery as it is practiced in different countries along with the chance to compare and contrast its delivery versus its administration in the United States, and how that affects their practice. They have learned a variety of lessons about these respective countries.

For example, in many nations, students are noticing that antibiotics are readily available without the need for a doctor's prescription, whereas that is not the case in the United States.

In Thailand, universal health insurance is available, which covers inpatient and outpatient care, surgery, and drugs. The Department of Medical Services at the Ministry of Public Health provided funding for this health insurance. Several mechanisms are used to help contain costs, including capitation. Additionally, the government has monopsony power in negotiations with providers and pharmaceutical manufacturers.[11] The country has a low doctor-to-population ratio, and attracting and retaining qualified health workers in remote rural areas is difficult.

Likewise, South Korea has universal health insurance for its citizens. Starting in 1977, the government-mandated medical insurance for employees and their dependents in large firms with >500 employees.[12] In 1989, national health insurance was extended to the whole nation. A single insurer system was established in 2000 by integrating all existing health insurance funds.[13] Benefits are the same for the whole population and patients pay a fee for service for all services.[14]

In addition to the differences in health care insurance, there are profound differences in the manner in which health care is delivered. Some student comments included: "It was a humbling experience and eye-opener," "It was so nice to meet other adventurous and nature-loving pharmacy students from other parts of the country," "their pharmaceutical practice is different from the US."

The students who participated in these international rotations were quite cognizant of those differences and tried to incorporate lessons learned into their practices when they returned to the United States. Cultural differences accounted for some of those differences. For example, although there is no patient privacy law similar to HIPAA in Thailand, health care professionals and patients have great respect for patient privacy. Thai culture places a strong emphasis on family connections, and not maintaining the privacy of health information is seen as dishonoring the family. Another student remarked that in her experience in Peru, all the people trusted each other, with many nonpharmaceutical remedies used to cure patients. The students remarked that they would include more interaction with patients, and listen more closely to their problems, before making recommendations, and would be willing to try nonpharmaceutical interventions first. In a similar context, medical students also are learning about the powerful role that culture plays in health care delivery and compliance. For example, even in the Omic age where the power of modern science is being used to develop precise medicines to treat specific diseases on the individual level, through cultural experiences, medical students are learning that genuine respect for patients' cultures builds the trust that makes the patients receptive to trying modern medicines to treat serious diseases. For example, some students and faculty may observe the concurrent use of herbal medicines with advanced chemotherapeutics for cancer because the patients experience deep conflict or may be insulted if traditional medicines or treatments are diminished in any way. To that end, one of our medical students recently won both Doris Duke and Fulbright fellowships to research the effectiveness of Traditional Chinese Medicine in treating and managing HIV-AIDS. The student remarked that some caregivers find it puzzling if not annoying that patients do not readily adapt proven modern medicines (eg, gold-standard antiretroviral therapy) to treat HIV-AIDS. However, not surprisingly, her team found that the Chinese people are proud of their herbal medicine heritage, which they argue is thousands of years old and therefore should be respected. This young student is finding that respect builds trust, which opens dialogue that can lead to patients at least trying modern medicine after or along with traditional medicines. This prevents outright rejection of interventions if patients believe are being forced on them. Therefore, like the pharmacy students, medical students are finding that although culture and tradition were historically perceived to be barriers to treating patients in global or more insulated cultures, cultural competence gained from experiential learning is now clearly seen as a bridge to provide care in holistic manners.

From a medical school perspective at the University of Maryland, we are observing several interesting trends with incoming and current medical students. If there is one unifying theme in these trends, it is that the students are seeking greater meaning and connectedness between their academics, practicums, and the individuals in the various communities with whom they interact. Their view of community is very broad and their empathy indices are high for both local and global communities. The students are deliberate and explicit in their search for purposefulness and connectedness, which includes interactions with their immediate peers and their faculty in the School of Medicine as well as interactions with their colleagues in other schools across the University of Maryland, Baltimore (UMB) campus. The students also are deeply conscientious and even strategic about their activities and will at some point in their consideration and clerkship selection processes, actively pursue engagements that satisfy their academic requirements as well as their passions and personal needs.

Medical students are seeking interactions with global and local community in one-on-one health service contexts. They reported that these interactions have exposed them to the remarkable similarities of many challenges within and between local and global communities. On the other hand, the students also reported that they learned creative solutions to complex problems from individuals who live in environments with limited resources. Finally, by interacting with global and local communities in any order, the students reflected on being transformed in that their empathy indices are raised, they can connect with a broader spectrum of individuals more deeply and faster, and they become more people-focused and less problem-focused throughout the process. Students have indicated that they were embarrassed to first learn how

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judgmental they were or could be and how deep interactions moved them past this propensity.

The demands for both local and global interactions in interprofessional team settings are also increasing among our medical students and faculty. For example, in the intramural-funded UMB Global Health Program, faculty create global health projects and compete for funding. Faculty awards are based on meritorious peer review. Students then apply to successfully funded projects and student acceptance and awards are based on competitive review. Final awards require combinations of interprofessional students and faculty. In 2014 and 2015, 78 students were supported in 18 different projects in 11 countries on the UMB Global Health Program. Although students must be highly competitive as individuals to gain entry into UMB graduate professional programs and to secure interprofessional global health grants, they also seek competitive interprofessional education (IPE) activities. In this regard, a highly regarded interprofessional competitive activity is the National Academy of Medicine's Annual DC Health Challenge. Remarkably, activities such as this show and foster both student transformations and flexibilities in that they value team wins as much as individual accomplishments. They are focused on collective wins both for themselves, their teams, and their patients. One example of a local (intercity) effort occurred in fall 2015, when a team of UMB students from the schools of Pharmacy, Law, Medicine, Nursing and Social Work all competed in the DC Health Challenge. The UMB IPE team included students who faculty mentors considered to be not only academically strong and talented, but ones who were also highly coachable, thought leaders, and excellent team players. The students had to provide a best solution for a hypothetical case involving a retired veteran who had physical as well as psychosocial health problems in conjunction with socioeconomic challenges. At their very first meeting, the students reviewed the case and immediately assigned elements of the challenge to their colleagues who demonstrated mini-expertise in particular domains. Whereas the health profession students drove the conversation around the immediate health and well-being of the individual, the law students' questions and drive were centered around having the patient's needs met in a sustainable fashion such as basic human rights, access to care and affordable housing, and food assistance. In the end, the students won the first place prize for creativity in solving the health problem.

In questioning the students about their experiences, they reflected on the holistic nature of the activity and placed high value on the process of finding each other's strengths. The students also reflected the differences between how they prioritized and initially approached the patient and his needs. For example, the medical student first felt that meeting the patient's immediate health need was highest priority. The law student tended toward legal rights and physical resources. The social work student tended toward social support and humanism, and the nursing student tended toward long-term health management. The pharmacy student tended toward medication availability, safety, and the patient's understanding and compliance. In the end, as a team, the students practiced holistic health care. They realized that each element handled by each contributor was equally important to the patient's well-being. They structured their presentation and solutions to the National Academy with this in mind. It was this comprehensiveness of thought, approach, and connectedness to their patient and his needs and their respect for and connectedness to their team mates that produced such a powerful solution. Certainly, these kinds of interactions and learning experiences are highly valuable for the student participants and are an important part of the experiential learning goals.

In addition to the interprofessional health challenge students, in general, when students involved in UMB global health and community engagement activities are asked how the experiences (local or global) affected them, the responses varied from increased awareness, open-mindedness, and respect, to a desire to pursue a career in global health research and further learning experiences that expand their worldview.

CONCLUSION

Many students have been affected by these global experiences, as they demonstrate increased awareness of the cultural differences in the community. In general, the experiences increased their awareness, respect, and open-mindedness and also increased their desire to pursue a career in global health research and other learning experiences to expand their worldview. Reflective statements after these experiences indicate that students will apply lessons learned in their profession and life. By interacting with global and local communities in any order, the medical students reflected on being transformed in that their empathy indices are

raised, they can connect with a broader spectrum of individuals more deeply and faster, and that they became more people-focused and less problem-focused throughout the process. The pharmacy students remarked that they would include more interaction with patients and listen more closely to their problems before making recommendations. They also indicated that they would be willing to try nonpharmaceutical interventions first. Students and mentors together concluded that to increase global citizenship in the academy, global health exposure to meaningful experiences with potential for local effects should be a mainstay at health profession schools. Many students also wish that the opportunities could be extended to all faculty and students. School administrators will need to prioritize resources to accommodate and support these endeavors.

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