

Global Health Education for Medical Students: When Learning Objectives Include Research

Alison M. Bales, BA,* Anthony R. Oddo, BS,* David J. Dennis, BS,* Robert C. Siska, BS,* Echo VanderWal, PA,[†] Harry VanderWal, MD,[†] Nompumelelo Dlamini, CA,[†] Ronald J. Markert, PhD,* and Mary C. McCarthy, MD*

*Department of Surgery, Boonshoft School of Medicine, Wright State University, Dayton, Ohio; and

[†]The Luke Commission, Miracle Campus, Sidvokodvo, Swaziland

BACKGROUND: The Luke Commission, a provider of comprehensive mobile health outreach in rural Swaziland, focuses on human immunodeficiency virus testing and prevention, including the performance of over 100 circumcisions weekly. Educational objectives for medical student global health electives are essential. Learning research methodology while engaging in clinical activities reinforces curriculum goals. Medical care databases can produce clinically significant findings affecting international health policy. Engaging in academic research exponentially increased the educational value of student experiences during an international medical elective.

METHODS: Staff of the Luke Commission, a nongovernmental organization, collected and deidentified information from 1500 Swazi male patients undergoing circumcision from January through June of 2014. Medical students designed studies and analyzed these data to produce research projects on adverse event rates, pain perception, and penile malformations. Institutional review board approval was obtained from the home institution and accompanying senior surgical faculty provided mentorship.

RESULTS: First-year medical students enrolled in an international medical elective to explore resource availability, cultural awareness, health care provision, and developing world endemic diseases. While in country, students learned research methodology, collected data, and engaged in research projects. Following the trip, students presented posters at over 10 regional and national meetings. All 4 articles are accepted or under consideration for publication by major journals.

Correspondence: Inquiries to Alison M. Bales, BA, Department of Surgery, 7th Floor, 128 E. Apple St., Dayton, Oh 45409; e-mail: bales.10@wright.edu, alibales@gmail.com

CONCLUSIONS: During international medical electives the combination of clinical experiences and access to databases from health aid organizations provides the foundation for productive medical student research. All participants benefit from the relationships formed by aid organizations, medical students, and patient populations. Global health research has many complexities, but through careful planning and cultural awareness, medical students can increase their research skills and contribute to the medical literature, bringing attention to and improving health care policies around the world. In sum, the educational experience of medical students is enhanced through the interaction of delivering patient care and completing clinical research studies. (J Surg Ed ■■■■-■■■. ©2017 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

KEY WORDS: medical student education, clinical research, global health, Swaziland, circumcision, HIV/AIDS

COMPETENCIES: Medical Knowledge, Practice-Based Learning and Improvement, Professionalism, Systems-Based Practice

INTRODUCTION

Medical students from the United States are increasingly interested in clinical and research experiences in resource-poor countries to improve their clinical skills and cultural competency and to broaden their view of public health. Interest in global health has a long history among students in United States medical schools, and enthusiasm has grown over the past decades.^{1,2} According to the Association of American Medical Colleges, in 1984 only 6%³ of graduating medical students participated in global health electives, but that number increased to 31.2% in 2015 and 28.0%

TABLE. Medical Student Objectives for Global Health Electives¹¹

<i>Pre-elective objectives</i>	
Building knowledge of tropical medicine	
Increasing cultural awareness	
Understanding culture shock	
Language training	
Learning about resource availability	
<i>Intraelective objectives</i>	
Attending lectures	
Enhancing clinical skills	
Learning research methodology	
Engaging in research projects	
Learning a foreign language	
Maintaining and reviewing data entry logs	
Understanding different health care systems	
Learning about common health concerns in developing world	
Understanding clinical ethics	
Increasing cultural awareness	
Learning to manage diseases rarely seen at home	
Understanding differences in medical education	
Gaining surgical experience	
Functioning in low-resource settings	
Understanding cultural differences in treating patients	
<i>Postelective objectives</i>	
Understanding culture shock	
Reflecting on experiences	

in 2016.⁴ The number of medical schools offering a global health curriculum has risen, but there are significant concerns about the safety and preparedness of students participating.⁵ Wright State University Boonshoft School of Medicine's (WSUBSOM) global health initiative has offered a formal curriculum since its inception in 2000, resulting in an added certificate at graduation (Table).

Those students participating in global health care during medical school are more likely to choose primary care and generalist residencies, work with uninsured and disadvantaged populations, and have more involvement in health care public policy.^{6–9} Global health electives for medical students pose unique challenges, especially when research is conducted in addition to clinical responsibilities. This article describes one group of students' foray into their first global health experience and first research projects, both of which had a significant positive effect on their future career paths.

MATERIAL AND METHODS

The coauthors benefitted from WSUBSOM well-established partnership with The Luke Commission (TLC), based in Sidvokodvo, Swaziland, one of many examples of an academic institution working alongside an international health organization.

Soon after the establishment of TLC in 2005, WSUBSOM began sending medical students twice a year to work

alongside TLC for 1 month at a time, either at the end of the first year or during the fourth year of medical school. For a single fee TLC provides transportation from the border of South Africa and student housing and meals.

During the month-long clinical rotation, TLC sends a caravan into rural, mountainous areas of the country to offer medical outreach to the local population 3 times weekly. Students usually work in 1 of 4 areas: triage/human immunodeficiency virus testing, operating room, distributing donated shoes, or shadowing the general practitioner for comprehensive health care needs. Patients present to clinic with common medical conditions such as high blood pressure or diabetes, but they also have rare conditions such as intestinal parasites, large disfiguring tumors, leprosy, and goiters.

Although students had been traveling to Swaziland for years, no previous group conducted research. During the student coauthors' (A.M.B., A.R.O., D.J.D., and R.C.S.) trip in the summer of 2014, a senior surgical faculty member (M.C.M.) traveled with the group bringing her research experience and strong interest in mentoring medical students. Mentorship by the faculty member, TLC's dedication to improved patient care, its staff's patience from years of teaching and working with medical students, and an abundance of unanalyzed patient data led to the creation and completion of our research projects.

Ideally, preparatory work should be done before traveling. This includes a global health didactic course, introductory research course, predeparture contact with hosts about possible topics, beginning the literature review, and institutional review board (IRB) completion/approval. While on the ground in the host country students should focus on the clinical experience and assisting with data collection. Once the experience has concluded students should try and complete data analysis and an abstract in a timely manner to obtain publication approval from their hosts, an important step in article submission as well.

RESULTS

Initially TLC leadership suggested topics they would like explored. A total 6 of the 9 students on our trip chose projects they would like to spearhead and invited other students to participate. Ultimately, 3 studies were completed (adverse events after voluntary medical male circumcision in Swaziland, prevalence of preoperative penile abnormalities among voluntary male medical circumcision patients in Swaziland,¹⁰ and postoperative pain in ambulatory pediatric male circumcision in Swaziland). This article is a consequence of the success of the 3 studies. These 4 projects have been accepted as posters and oral presentations at multiple local and national meetings (Academic Surgical Congress, Association of Women Surgeons, American Medical Association, Consortium of Universities for Global

Download English Version:

<https://daneshyari.com/en/article/8834660>

Download Persian Version:

<https://daneshyari.com/article/8834660>

[Daneshyari.com](https://daneshyari.com)