

# Scaling Up Short-Term Humanitarian Surgery: A Global Surgery Elective for Senior Medical Students

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**OBJECTIVES:** The proportion of US medical students participating in global health has increased by 24%. These experiences are generally self-directed and lack a formal educational component. This article describes a structured, comprehensive, community-driven global surgery elective for senior-year students.

**DESIGN:** "Surgery and Global Health" is a monthlong elective during which students shadow in the university hospital, lead discussions of an assigned text, attend lectures, and participate in a clinical rotation in rural Haiti. The first week is didactic and takes place in Atlanta, GA. Weeks 2 through 4 are clinical and are conducted in Haiti. Urological and general surgery procedures are performed during weeks 2 and 3, while the final week is reserved for follow-up care. This experience was institutionally supported.

**SETTING:** Emory University Hospital, Atlanta, GA; L'Hôpital St. Thérèse, Hinche, Centre, Haiti.

**PARTICIPANTS:** Emory University School of Medicine students, years 2 through 4, supervised by faculty from the departments of Urology, General Surgery, and Anesthesiology. Senior-year students spent 21 days in central Haiti working in a rural clinical setting.

**RESULTS:** Students participated in all facets of surgical care including preoperative clearance, postanesthesia care, discharge planning, and follow-up. Students felt a level of supervised responsibility that was not afforded at their home institution and were able to take on more advanced clinical roles.

**CONCLUSIONS:** Students planned and executed this innovative experience with multidisciplinary, departmental, and institutional support. Stateside components introduced students to Haitian culture, global surgery ethics, and

humanitarian surgical trip logistics. Structured global health experiences such as this give students practical skills and incentive to pursue careers involving global surgery. (J Surg 71:871-877. © 2014 Association of Program Directors in Surgery. Published by Elsevier Inc. All rights reserved.)

**KEY WORDS:** undergraduate medical education, humanitarianism, clinical clerkship, students, health occupations, organizational innovation

**COMPETENCIES:** Patient Care, Systems-Based Practice, Interpersonal and Communication Skills

## INTRODUCTION

Access to surgical care is no longer considered a luxury but instead is seen as a critical component of public health.<sup>1,2</sup> This paradigm shift is recognized by medical educators in the United States, as global health learning opportunities are now incorporated into the curricula at most medical schools. More than 90% of institutions report offering formal global health opportunities during the preclinical and clinical years. These opportunities may include didactics, enhanced learning clinical tracts, pretravel courses, research electives, and clinical exchange programs.<sup>3,4</sup> Increased global health learning opportunities may be because of increased student interest; a hypothesis supported by a ubiquitous interest in international electives by postgraduate medical trainees.<sup>5,6</sup>

Student leadership has played a large role in the development of global health curricula. Global health experiences during medical school are often initiated by motivated students or isolated faculty and facilitated through nongovernmental organizations.<sup>7</sup> Currently, nearly one-third of US medical institutions boast students-led global health interest groups. Additionally, the proportion of medical school graduates participating in global health experiences has increased by 24% in the last 30 years.<sup>3,8,9</sup> Student leadership in global health extends beyond the local influence at a student's home

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institution, as students elevate the educational benefits of global health education to a broader audience through published research and perspective pieces.<sup>7,10,11</sup>

Few publications detailing comprehensive service learning opportunities in global health are produced by US medical schools, greatly underestimating their effect. This is especially true for global surgery. Academic medical institutions in the United States, with their supply of invested faculty and students, can be a natural resource for filling gaps in the provision of surgical care in low- and middle-income countries. Locally, the benefits of such programs are limitless, as engagement in global health activities benefit institutions, students, residents, and faculty.<sup>12-14</sup>

Emory Medishare is a student-faculty collaborative at Emory University (Atlanta, GA), which has partnered with a rural health nongovernmental organization—Project Medishare for Haiti—and the community of Hinche, Haiti, since 2008. We conduct annual short-term surgical trips to rural Haiti with the goal of reducing the high burden of surgical disease. This is accomplished by supplementing scarcely available urological and general surgical care while offering a unique educational experience to medical students. Recently, we have built on the success of our previously described 1-week international experiences,<sup>10,13,15</sup> expanding to a 1-month “Surgery and Global Health” elective for second-, third-, and fourth-year medical students. Here, we describe the enhanced educational benefits of the expanded 1-month elective course.

## METHODS

In June 2012, Emory Medishare’s previously described 1-week trip<sup>15</sup> was expanded to become a monthlong elective for fourth-year medical students. This elective was created through a collaboration with Emory University School of Medicine Office of Medical Student Education and Student Affairs, the Department of Urology, and the Department of Surgery. The logistical and patient care aspects of this trip have been previously described.<sup>15,16</sup> In short, fund-raising, supply procurement, and arrangement of travel and lodging in Haiti are led by the students with the support of Emory University School of Medicine faculty and Project Medishare for Haiti. Fourth-year medical students are responsible

for leading second- and third-year medical students in the trip planning and fund-raising efforts.

The annual “Surgery and Global Health” elective consisted of 4 weeks (Table 1). Week 1 was conducted at our home institution. During the day, students shadowed the attending general surgeons, urologists, and anesthesiologists who would be supervising the trip to Haiti. Lectures were held in the evening. Lecture topics included public health interventions in Haiti, Haitian history, effective coordination of nongovernmental organizations in developing nations, and the response to the 2010 cholera outbreak in Haiti. Each fourth-year student presented a chapter and discussed readings from the course text “Global Surgery and Public Health: A New Paradigm.”<sup>17</sup> At the end of week 1, fourth-year students departed for L’Hôpital St. Thérèse in Hinche, Haiti, so as to prepare for the arrival of attending physicians, midlevel professionals, and additional medical students. During this preparatory stage, students met with hospital administrators and staff, organized supplies and equipment, and started preparing operating rooms for the upcoming weeks. Senior students work closely with local nurses to provide postoperative care, discuss the upcoming operating schedule, and navigate patients through clinic and preoperative workup at the hospital laboratory facilities.

Week 2 marked the arrival of the first surgical team to L’Hôpital St. Thérèse. Multidisciplinary surgical teams consisted of 3 attending physicians representing the departments of urology, surgery, and anesthesiology; a general surgery resident; anesthetists; additional medical students; and nurses. All nurses in our surgical team are veteran intensive care practitioners from the Atlanta area. Each nurse spent some formative years in Haiti, allowing him or her to also serve as the primary translator. Transportation and living arrangements were provided through Project Medishare for Haiti.

On the arrival of faculty supervisors, preoperative clinic was set up. Students divided into teams and evaluated the history and conducted physical examinations of potential surgical patients. Patients were then presented to attending physicians for the final determination of surgical candidacy. Haitian-American, Creole-speaking nurses, as well as nonmedical neutral personnel, were available for interpretation. The latter mainly served as interpreters for obtaining histories, explaining the physical examination, and giving wound care instruction.

**TABLE 1.** Summary of a Monthlong Global Surgery Elective for Senior Medical Students

Week	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
1	Pretrip: Emory University Clinical rotations and shadowing Lectures and group discussion					Travel	Setup: Haiti OR and supply
2	Operative week 1: Haiti Urologic, general, and pediatric surgery						
3	Operative week 2: Haiti Urologic, general, and pediatric surgery						
4	Follow-Up: Haiti Clinic					Travel	

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