International Rotations during Residency: Spine Deformity Surgery in Ghana

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ABSTRACT

International elective rotations are becoming increasingly common in residency training programs. These experiences offer a tremendous opportunity to help patients in medically underserved nations, and can enhance training by exposing participants to pathology not often encountered in developed countries. Additionally, there is emerging evidence that international training exposure develops a broader appreciation of cultural diversity in patient care, offers personal and professional development, and teaches residents to use limited resources more efficiently, giving them a unique perspective on the ordering of tests and delivery of care when they return. This paper highlights the author's experience on a volunteer trip to Ghana that was focused on treating pediatric spinal deformity, and reviews notable international medical volunteers, and highlights the evidence supporting the benefits of international residency rotations.

FOCOS

Patients in Ghana.

INTRODUCTION

Residency training has undergone tremendous transformation over the last century. More than a century ago, William Halsted, MD, the first chief of surgery at Johns Hopkins Hospital and a founder of graduate medical education in the United States, required his residents to work 362 days per year.[1] His residents served as house-staff, living in the hospital while caring for their patients 24 hours per day. Residents throughout the 20th century worked tirelessly during shifts that often lasted well over 24 hours. This tradition came to an end when the residency training system in the United States changed drastically with the implementation of Accreditation Council for Graduate Medical Education (ACGME) resident duty-hour restrictions in 2003[2] and the addition of additional regulations in 2011.[1] Today, interns may work no more than 16 hours per day;[3] "strategic napping" is encouraged; residents log every procedure they perform, and paperwork and charting duties consume disheartening quantities of time.[4]

In addition to the greater supervision by attending physicians and duty-hour concerns in our workplace, there is commonly discussion regarding medical practice regulations, fear of malpractice litigation, and the ubiquitous concern over reduced reimbursement. In this modern healthcare environment, it is easy to forget why we chose a life of service in medicine, and it is all too common to become bogged down by the irksome tasks surrounding modern medical care.

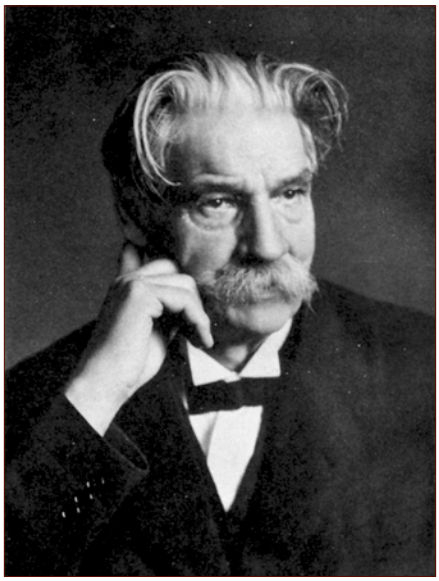
MEDICAL MISSIONARIES

Albert Schweitzer, MD

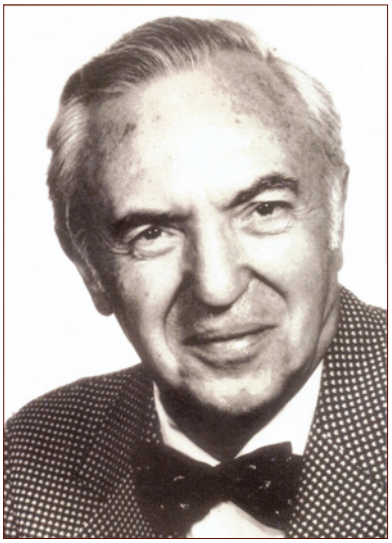
Fortunately, I recently discovered that there is still hope in medicine; it can still be a superbly rewarding experience to serve those in need. All is not lost. My rejuvenated passion for medicine came during a recent trip to Ghana, West Africa, on a volunteer medical mission trip dedicated to treating pediatric spinal deformity. I was following in the footsteps of so many great

physician-volunteers and medical missionaries who came before me. As the great physician-volunteer Albert Schweitzer said, "I don't know what your destiny will be, but one thing I do know: the only ones among you who will be really happy are those who have sought and found how to serve." One has to look no further than Dr. Schweitzer to see the quintessential life of service, and to discover one very rewarding way to serve the needy: medical mission work.

Albert Schweitzer was born in Kaysersberg, near the French-German border in 1875. The son of a minister, he graduated from medical school in 1911. His life and career were highlighted not only by his medical work, but by achievements in theology, music, and philosophy as well. He founded a hospital at Lambaréné in French Equatorial Africa (present-day Gabon) in 1924, and spent the majority of his life helping the needy there. He expanded his hospital to 70 buildings which could care for >500 inpatients at one time. He was rewarded for his work with the Nobel Peace Prize of 1952. With the $33,000 prize money, he started the Leprosarium at Lambaréné. Dr. Schweitzer died in 1965 at the age of 90, and was buried at Lambaréné.



Albert Schweitzer, MD



Caroll M. Silver, MD

Caroll M. Silver, MD

Another hero of medical volunteerism was a locally renowned orthopaedic surgeon, Caroll M. Silver, MD. Dr. Silver was born in New Britain, Connecticut, in 1913. He completed his professional training at Rush Medical School in Chicago. During World War II he was stationed for over three years in northern Africa as chief of orthopedic surgery at the 180th Station Hospital. After returning from the war, Dr. Silver set up practice in Providence in 1946, partnering with Dr. Stanley D. Simon. From 1949 to 1969, he was chief of orthopedic surgery at The Miriam Hospital. He also served as a consultant at Rhode Island Hospital, and was a clinical professor at the Brown University Medical School from 1977 to 1985.

Dr. Silver was a tireless traveler, lecturing, teaching, and serving all over the world. His medical trips took him to Egypt, Yugoslavia, Greece, Ethiopia, Hong Kong, Japan, Malaysia, Israel, Russia, China, Iran, Indonesia, Trinidad, and other areas. He travelled the world into his 90s, and passed away in 2012 at the age of 99.

Silver Fellowship to Ghana

Dr. Silver is not only an inspiration to me, but is also a major reason why I was able to travel to Ghana. I was given this great opportunity by my residency's Silver Travelling Fellowship program, which is dedicated to sending orthopaedic residents on international electives, and made possible by a generous grant from the Silver family. Inspired by the examples of Drs. Schweitzer and Silver, and the support of the Brown orthopaedic department, I travelled to Ghana in late 2012 with the Foundation of Orthopedics and Complex Spine (FOCOS).

FOCOS was founded in 1998 by Dr. Oheneba Boachie-Adjei, a native Ghanaian who has spent his life treating complex spine deformity. It is a nonprofit organization whose mission is to provide comprehensive, affordable orthopedic and spine care to underserved communities in Ghana, other West African countries and other sites around the globe. It has been sending teams to Ghana to perform pediatric spine deformity surgery for more than a decade. Baron Lonner, MD, was similarly inspired to write about his experience with FOCOS in 2003, providing an excellent overview of surgeon volunteerism in an article about his experience in Ghana.[5]

Ghana is a beautiful but extremely medically underserved country. There are only 8 physicians per 100,000 people, and less than 20 orthopaedic surgeons in a country of 25 million. Treating complex medical problems such as pediatric spine deformity requires tremendous financial resources and advanced multidisciplinary care. The medical infrastructure in Ghana is developing, but is unable to care for this challenging patient population without outside assistance.

During the two-week trip to Ghana, our FOCOS team performed 40 complex spine and scoliosis operations on children who were in severe need of surgical intervention. We worked from 6 a.m. until 10 p.m. each night. In addition to surgery, we provided care to pre- and postoperative patients, and performed countless consultations in the clinics preparing many children

for surgery to be performed during subsequent mission trips. We treated patients from Liberia, Sierra Leone, Ethiopia, Ghana, and other African countries. We also worked alongside the doctors and nurses in Ghana, teaching them how to take care of these complex postoperative patients. The overall goal of FOCOS is to develop a sustainable medical infrastructure and treatment system within Ghana and the other nations the organization serves.

The Ghanaian people taught me a great deal about working under conditions of limited resources, and about compassion and openness to new ideas. I made lasting friendships in Ghana, and I learned that medicine is a universal language. Those who have dedicated their lives to caring for those in need have an instant bond.

Travelling to Ghana was a life-changing experience which inspired me to dedicate an important part of my life to service overseas and to serving the patients who are most in need. I am sure that I will go back to Africa during my career. I was also reminded that we have underserved patients here in Rhode Island who must also be cared for with the same compassion and care that we provided in Africa.

In this time of great change in medicine, I strongly urge trainees to remember your commitment to serve those in need. International electives are a tremendous opportunity to volunteer time to underserved patients in developing nations. The experience can refresh interest in medicine, and can assuage the sometimes low morale of residency. Additionally, these experiences can greatly enhance training by exposing trainees to pathology not often encountered in developed nations, and provide the experience of working side-by-side with local physicians.[6] There is also growing evidence that an international elective can make residents more resource efficient,[7] help them to develop a broader appreciation of cultural diversity in patient care, and enhance personal and professional development.[8] Training programs themselves should also work to develop dedicated blocks of time for international electives, as applicants actively seek positions in residency programs with international opportunities.[9]

PHOTO COURTESY OF ALAN H. DANIELS, MD

Alan H. Daniels, MD, second from right, in Ghana.

In this rapidly changing time in medicine, one thing is constant – providing care to those that need it most is rewarding and energizing. My time in Ghana reinvigorated my passion for medicine and for caring for patients. I promise you this: if you go abroad as a medical volunteer, you will not regret it.

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