

STUDENT/ RESIDENT CATEGORY WINNER

## From Louisvilleto Honduras: **ABiography** of My Greatest Medical Mentor



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S A SENIOR MEDICAL
STUDENT rapidly approaching the culmination of my training at
UofL, I increasingly find myself reminiscing about the last four years of my life. While my tenure in medical

school has been overwhelming at times, it has nonetheless been a metamorphosis in the truest sense of the word. Although I have lately been busied more and more with mounting patient care responsibilities and complex medical decision-making, I have also been unable to escape my thoughts about those who have

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guided me along this odyssey. Though many attending physicians, residents and classmates have undoubtedly shaped my education in piecemeal fashion, only one person unmistakably comes into focus as the constant guiding light, inspiration and true personal mentor of my medical school career.

I would love to claim her as my own, but Dr. Mary Carter is as unselfish in her guidance as she is openly accessible to her students. Over her 18 years in academic medicine and medical student education, Dr. Carter has continually and limitlessly made herself available to any and all who seek her direction and counsel. To many second-year students, she is a skilled educator who is somehow able to make complex biostatistics approachable and even comprehensible. To third- and fourth-year students, she is a thoughtful coordinator striving to improve the medical school's commitment to high-quality clinical skills education and hands-on learning through standardized patient encounters. Yet to a select and fortunate few, Dr. Carter is our closest friend and adviser – simply known to us as Mary.

I first met Mary when I was a bright-eyed, inexperienced, and somewhat timid first-year student. Having been raised in Costa Rica as a child, I was intrigued to learn of an opportunity to return to Central America to work in a local hospital in Honduras for the summer following my first year of medical school. As I gathered information about the experience, I quickly discovered that the 2nd Year Elective Rotation in Honduras was conceived and implemented by Mary in its entirety. Started in 2003, the 2nd Year Elective Rotation in Honduras is a program specifically designed to augment medical education at UofL in a dimension never before realized before Mary's efforts. Following a selective application and interview process in October of each year, four first-year medical students are elected into the program. Then, over the course of the ensuing year, each student is individually trained by Mary and previous Honduras students in medical and surgical skills, such as advanced suturing and knot-tying and basic diagnosis and treatment of disease. Brilliant in its simplicity, this training dynamic not only prepares each first-year group for their upcoming externship in Honduras, but also provides an avenue by which more senior medical students learn to hone their didactic and instructional skills. As a third- and fourth-year medical student, achieving honors on my surgical rotations was made much easier from my training with Mary and the Honduras students. Throughout the entire process, however, Mary insists on the singular importance of performing well in medical school, and has never once allowed Honduras preparation to interfere with medical studies or clinical duties.

Yet to understand the tireless driving force behind the 2nd Year Elective to Honduras, we must first digress slightly to explore Mary's humble beginnings in St. Louis as a girl born into a middle class family where women were strongly steered toward the domestic arts. In her own words, "In my family, the women had babies and the men went to college - that's just the way it was." But Mary was different. After coping with the death of a childhood friend in a bicycle versus motor vehicle accident and struggling to understand why medical science could not save his life, Mary, then at the age of nine, soon turned all of her focus and attention to becoming a surgeon. Although in opposition to her upbringing, Mary quickly cast off her restrictive familial precepts, catching her stride through her studies. After being named the valedictorian of her high school class, Mary continued to excel in her undergraduate studies at Washington University in St. Louis. It was here that Mary's interest in international medical relief work first took form.

As a mere freshman of 19 years of age and unsatisfied with the educational opportunities available to her during her first undergraduate summer break, Mary, again of her own volition, wrote 200 letters to Jesuit missions across Central America inquiring about the possibility of participating in a medical relief internship. After countless rejections on the basis of her gender and age, Mary finally received acceptance from a convent in El Progreso, Honduras, a rural, dust-bowl town approximately eight hours northeast of Tegucigalpa. Thrilled with her externship, Mary immediately began fundraising and gathering supplies for her trip. After a successful fundraising campaign, Mary ventured to El Progreso for the first time in May 1983 and worked in a medical clinic for three months, seeing approximately 100 patients a day. Handing out medications, such as much-needed antibiotics and antiparasitics, as well as foodstuffs and other supplies she had purchased and brought down herself, she was profoundly affected by her exposure to the Honduran population for the first time. In her own words:

"For the first time in my life, I witnessed death, malnourished children, and the sheer poverty that existed outside the United States. While in El Progreso that first time, I contracted dysentery and every type of intestinal worm you can think of, but it was all exceptionally worth it. I remember wondering then how life could possibly be so different between El Progreso and the United

States; how these people had been born into poverty, while I had been born into relative wealth – and I couldn't reconcile why that had happened. What made me so different from them?"

Over the next 20 years, Mary would revisit Honduras at least twice a year, bringing down over 35 boxes of medical supplies and foodstuffs with each trip. In fact, she became so proficient at fundraising and shipping items into El Progreso that the sisters at the convent through which she was working could not keep up with the seemingly endless tide of imported goods. But Mary was just warming up.

After completing her undergraduate studies with summa cum laude distinction and her acceptance into medical school at the University of Texas Southwestern in 1986, she increased her devotion to medical care in Honduras by traveling down to El Progreso on every possible vacation to increase her fundraising efforts and to work as a surgeon-assistant in the newly constructed local hospital. Throughout 1986-1987, working assiduously under the instruction of Dr. Esau Castillo, a legendary obstetrician and gynecologist who was recently honored in Honduras for having successfully delivered over 50,000 children in his career, Mary quickly honed her surgical and patient care skills. Then, during her third and fourth years of medical school, Mary began bringing her classmates down to Honduras with her, sharing her experience for the advancement of her classmates in a way only she could accomplish.

Upon her completion of medical school in 1990 and acceptance into General Surgery residency at the University of Louisville, Mary encountered work demands that would seem insurmountable to current surgical residents. Yet where others could have postponed their humanitarian efforts, Mary continued to provide relief aid in any form possible throughout her residency. Though unable to personally travel to El Progreso as she had done in the past due to her clinical responsibilities, Mary established the Honduras Project through her church to further increase the amount of aid exported to Honduras. Highly successful, this organization would routinely transport multiple 40-foot containers filled with medical supplies to El Progreso, where the local hospital would have surely been worse for the wear without her support. Furthermore, eager to become the finest physician scientist she could be, Mary applied for and was accepted into a PhD program in the middle of her surgical residency, working as a resident by day and completing her PhD studies at night. Nothing, it seemed, could slow Mary Carter down.

And then the cancer hit.

After a long period of fatigue beginning in November 1995, the usually indefatigable Mary was surprised when her dentist discovered a patch of leukoplakia on her tongue. After numerous biopsies by her otolaryngologist, which all demonstrated mild to moderate dysplasia without evidence of malignancy, Mary believed she was in the clear, and resumed her clinical duties. This did not last, however, and following a severe bout of double vision, nausea, vomiting, worsening fatigue, and unrelenting tongue pain, Mary knew something was seriously wrong. After a final biopsy in March 1996, she was found to have poorly differentiated, T2N1M0 Stage III squamous cell carcinoma of the tongue, a diagnosis that carried with it a dismal prognosis of five-year survival rate of 33 percent. The odds were against her - it was 2-to-1 that Mary Carter would be dead within five years.

Where most people would have given up, Mary stood ready to fight. After successfully completing her PhD degree with distinction in the Department of Physiology & Biophysics in May 1996, Mary took a medical leave from her residency to fight her cancer head on, face-to-face. After partial glossectomy and modified radical neck dissection, she immediately began an aggressive regimen of chemotherapy with Cisplatin and 5-Fluorouracil, as well as 35 radiation treatments of 6,800 Rads each. She lost her weight and her hair, but not her drive or her determination; and, by July 1997, Mary was ready to get back to work. Starting off slowly, Mary began duties as a third and fourth-year medical student educator through the Department of Surgery at the University of Louisville. In fact, she performed this role so effectively in her first year that she was awarded the Golden Apple Award by her medical students in 1998.

By May 1999, a mere three years after her diagnosis and debilitating treatment, Mary was once again ready to resume her surgical training. By March 2000, she had worked her strength up to be able to once again assume overnight call resident duties, but she quickly became fatiqued once more. Worried about a cancer relapse, and after enduring another major surgery, she finally conceded to her dreams of becoming a surgeon in October 2000, and instead decided to devote herself headlong to the advancement of medical student education. In this light of an increased devotion to medical education, the 2nd Year Elective in Honduras was born in 2003, and each year since its inception it has forever changed four medical students' worldly perspectives and has dramatically improved their overall medical education at the University of Louisville.

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(It would also be prudent at this point to share that Mary was again diagnosed with a second primary T1N0M0 squamous cell malignancy in February 2006, for which she underwent a marginal mandibulectomy with eventual fibular free flap mandibular reconstruction. To this day, Mary remains in remission from not one, but two, primary squamous cell oral cancers.)

Throughout my experience with the 2nd Year Elective in Honduras in 2006, Mary not only spent innumerable hours teaching me the mechanics of medicine and surgery, including suturing, knot-tying, scrubbing, gowning and gloving, medical Spanish, and diagnosis and treatment of common diseases, but she also simultaneously infused me with a sense of self-confidence and a contagious passion for medicine unlike anything I had ever before experienced or conceived. Although I had wanted to become a physician since childhood, Mary imbued my personal drive with an inexpressible compelling sense of urgency and revamped purpose. Through my preparation for the Honduras experience, Mary singlehandedly transformed me into the young physician I had always aspired to be, but had never been able to fully realize on my own.

Of course, I am not alone in these laudatory sentiments. When petitioned to write a few words about how Mary has changed their lives, other Honduras students similarly responded with emphatic, glowing praise. Rather than paraphrasing their remarks, I include them here unabridged as a testament to Mary's unparalleled influence on her students. One Honduras student, now a first-year orthopedic resident at UofL, had the following comments about Mary:

"Mary Carter has been one the most influential people in the past five years of my life and I am fortunate to be able to count her as one of my truest friends. Her dedication to the people of Honduras is legendary. She has been traveling to serve the underprivileged people there for over 20 years. Her love and care for individuals has personally been shown to me. She has always included me in the Honduras project's activities even though I completed my first year rotation long ago. She, having completed a general surgery residency, is much more competent than I am at teaching suturing skills, yet she allows me that teaching opportunity which has helped me more than she knows.

Lastly, and most importantly, is how Mary has

been my friend. I am originally from Utah, and I was recently married nine months ago to a young woman from Arizona. I matched in my residency in orthopedics to Louisville, away from both my wife's and my family. With my wife coming to terms with the long hours of internship, Mary befriended her and gave her a sense of belonging. Then, I was diagnosed with a brain tumor in September and required brain surgery. Mary, having twice been a survivor of malignant cancer, was quick to come to my aid. She bought equipment to help elevate the head of my bed, and stayed with my wife as I underwent surgery to remove the tumor. She hired a lawn specialist to cut my lawn while I was recovering from my operation, and again she helped my wife tremendously throughout the entire process, and continues to do so. I can honestly say that Mary Carter has been the biggest influence thus far in my medical career."

Another Honduras student, now at the end of her third year in medical school, replied to the inquiry with the following remarks:

"When people ask me who I look up to, I used to always say my daddy but after meeting Mary Carter, she takes the winning prize. Mary amazes me each time I have an interaction with her. I strive to be as optimistic and giving as she is in life. She was obviously the top of her class and a wonderful resident before the cancer happened and it must be really hard for her to not be able to touch a scalpel again. Her life story really goes to show that there is more to people's lives than just their job and how much of a change one individual can make if they really care to try."

When asked to compile a list of personal attributes that best describe Mary, her students produced the following (and let it be noted that I include only descriptors that were repeated more than once):

"Kind, caring, loving, bright, empathetic, sympathetic for the indigent and underserved, selfless, energetic, leadership, perseverance, intelligent, inspirational, encouraging, compassionate, passionate, and courageous."

I am clearly not alone when I attest that few people have influenced me in the sheer order of magnitude that

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Mary has, and she has done so gracefully and effortlessly. She is the epitome of role models. Under her careful instruction and with an unwavering investment in my success and well-being, Mary molded me into the senior medical student I am today. Far from the timid first-year student who first shuffled into her office, I am now a young physician confident enough in my abilities to provide excellent patient care, yet humble enough to know that there is still much left to learn. While my medical school exams and clinical rotations taught me the fundamentals of medicine, Mary has prepared me to practice the Art of being a physician, a humanitarian, an educator, a leader, a patient-advocate, a teacher, and an enthusiastic lover of medicine. Mary enhanced my medical education in a way that no attending physician, resident, or classmate could have ever accomplished, even with their efforts combined. In fact, the term "medical mentor" seems feebly inadequate to encompass Dr. Mary Carter: and, remarkably, I am but just one of many lives across the world she has humbly, and everlastingly, transformed.

In parting, I would like to share Mary's final e-mail to myself and the three other medical students who traveled down to Honduras with me for the 2006 externship. In my mind, it captures Mary's unwavering and undeniable confidence, investment, and pride in us. It shows us just how much Mary will forever care about her students:

"You are now among the top one percent of all Americans in regards to intelligence, smarts, ability, and drive. You are the crème of the crème, the best of the best. You have been through Top Gun and you have all survived. I congratulate you all for doing such a great job in medical school. Whichever residency gets you will be lucky. I would love it if all of you could remain in Louisville for your residency but I realize that is not possible. Ultimately, wherever you match next week, that place will be very lucky to have you on board at their institution.

Please know that you can always call me any time if you need me. If you are on call and you have a quick question, or you are getting married, or you win an award, or you need a letter of recommendation, ANYTHING, I am here for you. My address and phone number will not change in the far future that I am aware of, so feel welcome to call me, email me, or write me. I feel like you are all my friends and I will be happy to do whatever I can to help you for the rest of your careers." Ly