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As a junior in high school, I suffered second and third degree burns from the waist up while cooking in the kitchen one Sunday afternoon. After spending time at the UNC Hospitals burn unit and undergoing several surgeries, I knew I wanted to give back to the burn community to make a positive difference. Thus, when I heard about UNC Hospitals' partnership with the burn unit at the Kamuzu Central Hospital (KCH) in Lilongwe, Malawi, I deeply desired to go and help in any way I could.

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Malawi

Lilongwe

MALAWI BURN PREVENTION STUDY

After meeting with surgeons at UNC Hospitals, I learned that the burden of burn injury in low and middle-income countries (LMIC) is high, particularly in sub-Saharan Africa. Additionally, there was a limited understanding of burn prevention throughout sub-Saharan Africa, which is why they believed it was important to research and implement relevant burn prevention strategies. However, to develop burn injury prevention strategies, characterizing the typical circumstances surrounding the burn event was imperative.

Receiving the Burch Fellowship allowed me to travel to Malawi to work at KCH for seven weeks during the summer of 2014. I worked with UNC Hospitals surgeons to create and translate a 35-question quantitative survey for patient guardians to understand how



serious burns occur for children ages eight and under, and the environment surrounding the accident. We specifically were interested in burns in children because prior research showed that they bear a disproportional share of the burn injury burden.

By the end of the study, my research assistant and I were able to interview 72 patients, which allowed us to gain valuable insight on the reality of burns in the country. The mean age of the cohort was 3 years, the most frequent mechanism of burn injury was flame and scalds, and a significant number of patients were unmonitored at the time of injury. Thus, an example of a simple burn prevention strategy could be watching young children when using fire. After returning to Chapel Hill, I was able to work with UNC Hospitals surgeons to analyze the data and publish a report to

help create effective burn prevention strategies for those in sub-Saharan Africa. Furthermore, I had the opportunity to present my findings at Harvard University's National Collegiate Research Conference and the Council on Undergraduate Research's National Conference on Undergraduate Research.

From my time in Malawi, I learned that burn prevention strategies are necessary for addressing the high rates of burns for children in sub-Saharan Africa. The most important aspects of a burn prevention program should be caregiver education, continuation of burn research to influence public policy, and community monitoring. According to my study, the most cost-effective way to implement burn prevention strategies would be in the home environment.

While conducting research was certainly an incredible opportunity, I believe I got so much more out of my time in Malawi. For instance, I was originally planning on living in the UNC Guest House, which was located right next to KCH. However, at the last minute, my housing plans fell through and I was left without a place to stay. I was able to find a Malawian family to live with for the summer. This was an extremely challenging yet rewarding experience for me. I often had a hard time communicating with them due to the language barrier, and we ate rice and beans twice a day for the entire summer. I drove to the hospital every day in a 25-year-old car, and it broke down in the middle of the barely existent road at least once a week. But at the same time, I gained a greater understanding of the



Malawian culture by living with a host family. They would take me on long walks through the village to teach me about the people and their history. Another highlight was learning how to cook several Malawi staple foods and grocery shop at the local market. I also saw first-hand how burn accidents are so prevalent in the country.

Malawians, including my host family use ground-level campfires for cooking meals and heating bathwater, and for light and heat. They would often share stories of how broken the healthcare system is. For instance, my host mother had a cousin who died during childbirth because the hospital did not have basic resources such as gloves to properly deliver the baby. I could easily see how death from burns could be so common. Because they live in the villages and know the culture well, my host family also helped me think of ways to most effectively disseminate burn prevention strategies. Most people in the village are illiterate, but each chief knows how to read and is well respected, so my host family believed resources should be devoted to educating village chiefs. It was so helpful to have this type of anecdotal evidence to support the research I was conducting at KCH.

As a public health major, I gained a new devotion to global health after my time in Malawi. I want to do everything possible to continue positively impacting the lives of others throughout the world. As a Burch Fellow, I not only had the opportunity to publish research on burn prevention strategies, but I was able to build lifelong friendships with doctors, nurses, and patients at KCH, as well as my host family and others I met throughout the community. I truly had a once-in-a-lifetime experience, and I am so thankful for the Burch Fellowship and all that it has allowed me to do.

