International Rotation- Ghana 2020

My interest in Global Health is what initially inspired me to pursue medical school, and one of my main reasons for choosing WVU is because of the incredibly robust Global Health Track. As such, I have been looking forward with anticipation and excitement to this international rotation in Ghana since beginning my medical training. I believe that studying abroad is one of the most enriching experiences, and is indispensably valuable in developing cross cultural communication skills and appreciation for the diversity of the myriad of human existence on our planet. During this rotation, there were several themes that arose as poignant qualities to practicing medicine as an international volunteer in Ghana: fragility, resiliency, and collaboration.

Fragility- At the end of our first week at the Baptist Medical Center (BMC), as we entered the pediatric under 5 years ward to begin morning rounds, we noticed a commotion around a patient's crib. The nurses were actively attempting CPR to resuscitate an infant. The infant had been on oxygen through nasal canula for respiratory distress, however, there was a power outage at the hospital, which had briefly stopped the flow of oxygen, and the patient began desaturating. Unfortunately, despite the valiant endeavor by the nurses, the infant did not survive. As I watched the nurses unhook the multiple tubes from his tiny body, and his mother wailed over her lifeless, limp child, I realized that this rotation in Ghana was going to be unlike any medical training I had yet experienced. Throughout this rotation, I was with several patients as they passed away, and each time I wondered if they may have survived had they had access to the same resources that we take for granted in the US. One patient arrived in clinic due to ongoing chest pain and shortness of breath. We were able to do a cardiac ultrasound and immediately saw a massively dilated left ventricle with hardly any muscular movement, and perhaps, a thrombus within the ventricle. Her radial pulse were thready and weak, and we were unable to get our pulse oximeters to register. She had been seen in the clinic about one year prior and prescribed medications for CHF, however, she had not been taking them, and instead was visiting the local "traditional" doctor, who was applying different herbal poultices for her ailments. We admitted her to the hospital, and were able to get an EKG showing atrial fibrillation. We also suspected a possible Budd-Chiari syndrome with liver enlargement and abdominal ascites. Regrettably, other than give a few cardiac medications that the hospital had access to, and to supplement her oxygen, there was little we could offer for treatment. I felt saddened each morning on rounds, as I spoke with her granddaughter who kept vigilance at her bedside, because I know that if my own grandmother had this medical condition, she would be admitted to a state of the art cardiology unit, and have an entire team of specialists that could provide so many more options. She passed away several days after her admission, with a swollen abdomen, edematous legs, gasping for oxygen, as her heart failed. Through these patients, I learned how fragile human existence can be, and how quickly the spark of life can be extinguished. As physicians, we hold the utmost responsibility to provide the highest quality health care that we possibly can, no matter the setting.

Resiliency- A nurse was attempting to insert an IV into a 10 year old girl who just arrived to BMC and had been unconscious since morning. My classmate and I began taking a history and doing

a physical exam. I lifted her eyelids to find nystagmus in both eyes, realized she was actively seizing, and called my attending over so we could administer a STAT dose of diazepam. I had never witnessed a seizure in a pediatric patient prior to this trip. In Ghana, I witnessed several. Often, the seizures would be so subtle, that they would go unrecognized by nursing staff or parents. There is very little testing available at the facility. A rudimentary LP can be done, but cultures and sensitivities are not possible. Patients can also be tested for malaria, to determine if it's possibly cerebral malaria. Mostly, these patients are treated empirically with antibiotics, and perhaps an antiviral agent if the patient is not responding to treatment. If their seizures persist, there is also phenobarbital available, and sometimes they are scheduled with regular benzodiazepines to keep them at bay. These patients, however, taught me about the resiliency of pediatric patients. Multiple times, I was involved in the care of these seizing patients, with probable meningitis or cerebral malaria, and watched for multiple days as they were completely unresponsive and had repetitive seizures. However, most of these children eventually recovered, and suddenly one day I would see them sitting up in bed and contently eating porridge. The turn around would be astounding. Here, I really saw the effectiveness of antibiotics on treating infectious diseases, and witnessed the fortitude of patients in their ability to recover.

Collaboration- Many patients from around this area in Ghana prefer to go to the Baptist Medical Center because it often has volunteer doctors visiting from high income countries, like the US. Patients feel that they are receiving a high level of care, and appreciate the way that we interact with them as compassionate providers of healthcare. Moreover, most healthcare facilities in this region of Ghana do not have enough doctors to fully staff the hospitals and clinics. Unfortunately, there are few training programs, and many doctors decide to leave Ghana and live abroad after they complete training. The doctors at BMC were grateful for volunteer help, because it decreases the burden in the sheer numbers of patients they are responsible for treating on a daily basis. As visitors, the residents and attending physicians are also able to give lectures to the staff, in updates to current medical practices, and share their expertise in different patient cases. Also, as outsiders, sometimes we are able to notice ways in which standard hospital protocols and quality of care can be improved. The residents on our trip were able to put together a presentation aimed at educating the nursing staff on how to recognize and alert the doctors on critical patient issues. The nurses at BMC are our lifeline. They spend the majority of time with patients, and act as translators for us, so without their assistance we are virtually incapacitated.

Our Ghanaian colleague doctors taught us about how to treat many illnesses that we do not routinely see in the US, like malaria, tuberculosis and parasitic infections. Additionally, we adopted practices to be more conscientious about the limited resources available at this facility, as lots of medical equipment is reused, or repurposed, rather than thrown away. For instance, in the operating room items like cloth gowns, cautery pens, and suction tubing are sterilized and reused, rather than trashed, as we do in the US. In terms of obstetrical care, I also learned that there is a higher rate of cesarean sections than in the US, because BMC lacks the means of fetal heart monitoring during labor, and so this lifesaving operation is integral to decreasing maternal and neonatal mortality rates. I discovered the importance of international partnership

and collaboration, and how by mutually sharing our knowledge and training, that physicians can create a more tenacious system for delivery of health care on a global scale.

In all, this experience of learning and volunteering in Ghana will stay with me for a lifetime. My ambition to pursue Global Health has exponentially increased, and I will forever cherish this first step as I walk my path to my future career.