Pre-Medicine Internship Program

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SUMMER 2024 ALUMNI

Expanding a Passion for Medicine: A Hands-On Internship Experience in Kenya's Diverse Clinical Environments

My experience with the International Medical Aid program in Kenya was unique in many ways. I have been interested in healthcare from a young age, and this program afforded me the opportunity to see that the core values inherent to medicine cross borders and cultures. My passion runs deep and has been expanded after this experience. There are countless ways to give back to the community through healthcare, and my particular interest lies in helping others through cosmetic surgery. The Kenya internship furthered my commitment to helping others receive basic medical attention that should not be limited by borders or financial resources.

My specific field of interest has been cosmetic and reconstructive facial surgery. Although cosmetic surgery can often be stereotyped as vanity driven, I believe that self-confidence can be life changing. Participating in the healthcare system of Kenya broadened that perspective, allowing me to see that life changing events requiring cosmetic surgery are often not by choice. Accidents, congenital abnormalities or severe injuries that may be more likely to be not properly treated or left untreated in a less developed society may affect appearance that could otherwise greatly improve an individual's life rather than to define it.

Throughout my internship with IMA, I had the unique opportunity to work closely and shadow with various healthcare professionals at Coast General Hospital: a local public hospital located in the heart of Mombasa. Coast General Hospital is also considered a level 5 teaching and referral hospital, hosting numerous medical students, as well as PA and nursing students. As soon as I stepped off the bus at Coast General Hospital, I was shocked by the vast differences in lack of resources and staff compared to the US. Examples such as no air conditioning, certain machines not working properly, lack of resources and equipment necessary to treat specific patients properly, or even a lack of staff present are just some of the few instances where healthcare in Kenya differed from that of the US.

During my three-week IMA internship, with my peers, we rotated through various departments within the hospital. We gained exposure through different areas of medical practice-including, primary care, surgery, the Accident & Emergency Department and the Neonatal Intensive Care Unit (NICU). We observed and participated in various medical procedures and patient care environments, enhancing our passion and understanding of the diverse aspects of healthcare.

The Surgery Department was my first rotation and provided a profound introduction to the challenges and practices within the local medical system of Mombasa. The ongoing worker's strike involving

many of the doctors and nurses of Coast General Hospital has greatly affected what is already challenging availability within the local healthcare system. We were able to see a few surgeries in the main theater including: an Arteriovenous Fistula, a surgery involving a 15 year old kid that was having trouble urinating as well as pain in his bladder region, and a craniotomy. In the ICU wing, we observed patients in critical condition and were supervised by Dr. Mohammad who, given the challenging conditions, almost effortlessly demonstrated compassion and professionalism to our intern group as well as the patients.

Week two moved on to the Accident and Emergency Department, where I was pulled right in and magnified the stark differences to care in the USA. During my time in the A&E Department, I was exposed to many doctors as various emergency cases came in. Each with their own unique style of helping patients through the immediate difficulties that they were faced with. Throughout my time working in the hospital, I found that many of the patients sought help only when their infections or illnesses had progressed significantly. This delay was often due to religious beliefs that can limit the practice of medicine in helping aid illness and injuries. Nikki Georggi, - a second year MSc-GH student at Duke University who had undergone research pertaining to the United Methodist Church(UMC) clergy in Western Kenya, stated that "traditionally, Africans do not compartmentalize religion and health as Westerners tend to do[...]In Africa, religion is known to play an important role in the daily life of its inhabitants; however, the overall well-being of clergy, including mental, spiritual and physical health, remains under-studied"(Georggi, 2012). Unlike in Western cultures like the US, where healthcare and religious practices are usually seen as separate domains, in Africa, they are deeply rooted together. This religious perspective can significantly impact how individuals seek medical help, which often leads to delays in treatment as seen at Coast General Hospital. Being able to understand these cultural and religious discrepancies is critical for healthcare providers, as it helps adopt more effective and culturally sensitive healthcare practices that emphasize these challenges.

Patients seen in the A&E Department at Coast General Hospital included cases such as diabetes, jaundice, sepsis, and even very common cases of gang violence. One notable case, led by Dr. Yusra, involved a patient with a meningioma tumor in her brain. According to Dr. Yusra, this type of tumor can cause high blood sugar, which could potentially lead to diabetes. The patient was experiencing significant confusion and was at risk of ketoacidosis due to her diabetes. Further blood tests were done and revealed that her blood work showed a very low pH value, indicating she was in ketoacidosis. Dr. Yusra prescribed medication to stabilize the patient's vitals and arranged for further testing on the meningioma tumor. After the case, I got a chance to ask Dr. Yusra why so many diabetes patients are admitted to Coast General Hospital. She explained that diabetes is very common within the local civilian population due to a lack of necessary resources for treatment and their specific diets.

Another case that I found particularly interesting involved a woman with infected bedsores. These bedsores had led to sepsis, a severe and life-threatening condition that worsened the infection. The patient was bedridden due to a diagnosis of hydrocephalus, a neurological disorder caused by an abnormal buildup of cerebrospinal fluid(CSF) within the brain's cavities. This excess fluid can exert harmful pressure on the brain's tissues, leading to various complications including an abnormally large head, disorganized thoughts, loss of coordination and balance, and loss of bladder control— all of which the patient being observed presented. With the help of Dr. Said, the medical team first drained the CSF from the patient's spine to temporarily relieve some pressure from the brain. Simultaneously, the nurses sterilized the bed sore wounds to prevent further infection and administered antibiotics to treat the sepsis. I highlight this case specifically not only for the diagnosis itself, but for the main underlying cause behind her multiple infections. Because the patient did not have the money to pay for treatment early on with her hydrocephalus diagnosis, she developed further life-threatening complications. This situation exhibits the critical impact of financial barriers on health outcomes, demonstrating how delayed or inaccessible treatment can lead to severe complications.

While cases like this still occur throughout the healthcare system, the government of Kenya is taking measures to combat specific budgetary complications that many individuals face. According to the IMA slide deck titled "The Current State of Healthcare in Kenya," the government has taken measures to increase funding of primary healthcare services. These services include the introduction of the Health Services Sector Fund to ensure efficient and sufficient flow of resources, as well as abolishing user fees for specific groups such as children under the age of 5, pregnant women, orphans and vulnerable children. In return, the government increased budgetary allocations to these facilities to compensate them for revenue lost(medicalaid.org).

My third and final week of rotation was in the Neonatal Intensive Care Unit (NICU). I found this rotation the most challenging due to my limited knowledge in this area. However, after undergoing this specific rotation, I can honestly say that my perspective shifted, and I gained a deep appreciation for what the doctors and nurses endure while taking care of these babies. From feeding to washing, these dedicated healthcare professionals work around the clock to ensure the health and safety of the infants in their care. Dr. Mohamed Abrahim was fantastic in sharing insights and ensuring our understanding for how they treat each baby, as well as documenting each action taken by the nurses. One thing I found shocking was the amount of premature and jaundiced babies diagnosed in the NICU. Jaundice is caused by a non-functioning liver, leading to a buildup of bilirubin in the body, which can cause complications such as hepatitis. The treatment for jaundice is not too invasive; blue light therapy is commonly used to decrease bilirubin levels in the patient. If the levels remain high, antibiotics may also be administered. This experience highlighted the critical care required within the NICU, further deepening my admiration for the healthcare professionals working in this challenging environment.

During the last week of rotations, I also had the opportunity to participate in an afternoon shift in the OB department. Not knowing what to expect, I found it shocking that the women were not given any medication or anesthesia during childbirth. Moreover, the midwives were quite rough with the delivery process, pushing down on the women's abdomens and performing episiotomies— cutting the vaginal area— to increase the surface area for easier delivery of the baby. Sadly, I also witnessed some stillbirths throughout my time in the OB Department, as well as maternal deaths during childbirth. According to a CNN article published in 2015: "About 38 mothers die in childbirth in Mandera County for every 1,000 live births, according to the United Nations – two to three women a day"(CNN, 2015). This heartbreaking reality displayed the challenges faced within the OB department throughout Kenya, and the urgent need for improvements in maternal healthcare and support systems, including basic education which could dramatically improve the approach to healthcare in Kenya. Witnessing these events firsthand emphasized the critical importance of accessible prenatal and postnatal care for both mothers and their babies.

Unequivocally, my experience with the International Medical Aid program in Kenya was transformative, reinforcing my passion for healthcare and deepening my understanding of medical challenges within different environments around the world. Each rotation, from Surgery to Accident and Emergency and the NICU, provided diverse insights and practical knowledge. Witnessing the dedication of healthcare professionals, despite significant resource constraints and cultural complexities, inspired me to further pursue a career in not only cosmetic surgery, but healthcare in general. This internship emphasized the need for accessible, comprehensive healthcare and strengthened my commitment to creating an environment where patients will feel welcomed, supported, and empowered. I look forward to not only practicing medicine, but also continuing to give back through participating in organizations that prioritize making healthcare accessible for even the most needy among us.

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