Pre-Medicine Internship Program

Nora Vallarino

ARLINGTON HIGH SCHOOL

SUMMER 2024 ALUMNI

IMA Summer Internship: Endless Learning

I have always wanted to pursue a career in healthcare. When I was young, my desire stemmed from my interest in science and math. I looked up to my mother, a kind-hearted nurse, and wanted to follow in her footsteps. As I aged, I underwent several orthopedic surgeries. My experience fortified my passion for medicine. The patience of my orthopedist, explaining everything to a frightened yet curious girl, the compassion and benignity of the nurses, and the physical therapist's dedication inspired me. Without their efforts, I would not have been able to sprint down soccer fields or run half-marathons. I aspire to emulate such benevolence. Eagerly pursuing my passion, I searched for summer internships. I found International Medical Aid and instantly applied. I was overjoyed when I found out I had been accepted. I had no idea exactly how much I would learn.

Before my arrival, I knew I wanted to maximize my impact. I created a toy drive, where I raised hundreds of toys to donate. Each donation was euphoric; it was unlike anything I had ever felt before. From teddy bears to fidget toys, I knew each donation would bring a smile to a child's face. What I didn't expect was how much it would impact me. Even just thinking about my toy drive makes me smile. I felt an unmatched sense of ecstasy. I knew helping others makes one happy but this experience truly made that proverb a reality. My toy drive only further reinforced my desire to help others in any way that I can.

I zealously waited for June 14, the day I would leave for Mombasa. The night before I could hardly sleep, overflowing with excitement. After many hours of flying, dragging two huge duffle bags and a big suitcase of toys with me, I made it to Kenya. I met several interns, little did I know that they would become lifelong friends. We piled our belongings into the van and drove to the residence. Beaming with excitement, I could not wait for this opportunity. The weather was perfect as stunning palm trees reached towards the stars above. As we drove along, I looked out the window. I saw street vendors selling food to crowds, people riding tuk-tuks along the busiest streets, and goats prancing about. We drove over a dirt road, eventually reaching the residence. There, we were greeted by a herd of interns. They ran up to us from the pool, eager to introduce themselves and get to know us. Their amiable smiles were my first image of the residence. I knew most of the interns would be college students, and being a 16-year old high school student, I thought they wouldn't want to be around me. That couldn't have been farther from the truth. The other interns were very affable and actually wanted to get to know all of the high school students. After a long day of travel, I went to bed quite early, excited for what the next day would bring.

The next day, I woke up to the most beautiful morning. The weather was again perfect and everyone was very welcoming. All of the new interns ate a delicious breakfast prepared by the wonderful IMA

staff before listening to an introductory lecture. This lecture laid out our responsibilities as an intern, as well as brief background information about Kenya and its people, helping us to better empathetically care for patients. We were then driven to the hospital, where we were given a tour. Coast General Teaching and Referral Hospital was drastically different from any hospital I had ever seen. As we walked through the corridors, I saw monkeys roaming around and bugs on the floors. The hospital didn't have nearly the same resources as American hospitals, but yet the people there were infinitely stronger. The patients at Coast General possessed an inner strength unlike anything I had ever seen. We continued walking and stopped at this one particular ward. Dr. Shazim told us this ward often has up to 140 patients with one or two doctors and a nurse. In front of the group, he asked me if I believed each patient received the doctor's best possible care. I thought that was impossible: there was no way a doctor could give their best possible care to 140 different patients at once. My response was what I had thought rational: it is impossible for each patient to receive optimum care because there are just too many patients and not enough doctors. His response will forever resonate with me: our doctors will always try their best to give each patient their best possible care. Dr. Shazim's answer was very inspiring and the situation would be unheard of in the Western world; each doctor gives their patient their best when they have an insane amount of people to care for. I hope I continue to carry that same attitude with me throughout my journey: always give your best quality of care to every single person, even in seemingly impossible situations.

On my very first day at the hospital, I was placed in the New Born Unit. From my arrival, I was eager to help. Nursing students quickly taught me the best way to hold a baby and how to pick one up. Alongside another intern, we held babies as nursing students cleaned their beds. After cleaning several beds, a student asked me if I could pick up a baby with hydrocephalus. This baby had fluid buildup causing him to have an abnormally large head. Scared to cause harm to the baby, I asked the other intern if she could do it. I was shocked with how much they allowed us to help. Many of the doctors, nurses, and students believed us to be medical students or professionals ourselves. They were surprised when I told them I was still in high school, yet continued to ask for my help. A nursing student taught us how to make formula milk for the orphaned babies. Learning quickly, we made the formula ourselves for the remainder of the week. Every three hours mothers would come in to feed their children. Thus, every three hours we would feed the orphaned babies. There was one particular baby girl who I absolutely fell in love with. She was the sweetest and most precious baby. Feeding and holding her were the best parts of my day. I was fascinated with the NICU and developed an interest in neonatology. The ability to help a young human at their most vulnerable time is something quite profound and magical. Every second I was there, I learned something new. From how to take care of an infant, to different neonatal procedures, the learning was endless.

That very night, I did a night shift at Coast General. I was in the surgery department with four other interns. We had the opportunity to watch a transtibial amputation. The patient had severe burns and lost feeling in his leg, thus needing it removed. The entire procedure was unforgettable. It took around an hour and a half to put the patient under anesthesia. The patient was so malnourished and dehydrated that the anesthesiologist struggled to insert an IV. I winced as the patient was stuck over and over again trying to insert an epidural. The entire time this man's heart rate never exceeded 80 beats per minute. I'm pretty sure my own heart rate was over a hundred. After finally putting him under, one of the surgeons woke up from his nap and started the procedure. It started off just as I had suspected; the surgeons used a scalpel to carefully cut open his leg. And then everything changed. The nurse anesthetist started blasting Tik Tok videos, curled up in a chair in the corner of the OR. When it came time to cut the bone, one surgeon held the patient's thigh with both hands as they used some sort of wire to saw it. The surgeons were clearly using their entire strength to hold the thigh down and grind through the patient's tibia, however, the thigh still jolted up-and-down, as the sound of bone grinding echoed through the room. Suddenly, the patient's heart rate spiked, and the anesthesiologist went over to check on him. I asked another intern what happened. She said the patient woke up. The patient woke up while his leg was being sawed off by a piece of wire. I could feel my heart racing as I said a prayer for this poor man. The anesthesiologist was able to put him back to sleep before he was mentally conscious enough to move. After sawing off the tibia, the surgeons did the exact same method for the fibula. The cuts weren't clean, leaving the muscle and fat jagged. They grabbed the foot and slightly moved it--enough to detach it from the leg but close enough that the blood pooled out onto his healthy thigh. The surgeons then had to cut off more bone in order to close the skin. They grabbed pieces of muscle and fat, throwing them into the trash can allowing blood to spatter around the room. While they were sawing off more pieces of bone, a piece flew off and hit the anesthesiologist, squirting blood near an intern's eye. She was simply talking to the doctor, and ironically was the farthest away from the patient. I greatly looked up to her, she was a college student who answered every one of my questions, explaining what was going on in a manner I could understand. Seeing her fear after getting blood in her eye was absolutely terrifying. She quickly left to flush out her eye, another intern going with her. The rest of us stayed for the remainder of the procedure. As they were closing, the surgeons started asking us questions and laughing at us. We were just stupid Americans. They laughed as they sutured the patient's leg, each chuckle causing the stitch to jolt the leg up-and-down. After they finished, one surgeon asked me if my friend was okay. He said something absolutely shocking: you get used to having blood squirting in your face. The fact that it was normalized absolutely startled me. None of the surgeons wore goggles or any face protection. Yet they grew accustomed to the little resources, still putting themselves at risk to care for others.

After the surgery, the intern was rushed to the private hospital while the rest of us remained. I went to the post-operative unit where I started talking to a few nurses. One of them said he hadn't eaten in two days while the other laughed. I couldn't tell if he was joking or not. That's how prevalent malnourishment was. I remembered I had a protein bar in my backpack, and so I gave it to him. He ate it and inspected every detail of the packaging. The nurses asked us questions about life in America, and I was surprised to find out they knew more about American politics than many Americans did. This entire experience was very memorable. Seeing how content the nurses were with the lack of resources and their gratitude for the most mundane and minute snack was truly indelible.

Later that night, we walked around the hospital. There were no more surgeries, so we were finding a way to pass time before the bus came. As we walked around, I saw a foot sticking out of a body covered by a sheet. It took me a minute to realize that this person was not breathing. That this person was no longer alive. Although I had seen dead people at funerals, that was my first time actually seeing a dead person. A person who likely was alive just a few hours ago. A real human being, dead, but left abandoned on a bed in the middle of the night. Before the bus came, I had seen four more bodies. I will never forget that night.

Although it was a long and emotional night, I still wanted to come in the following morning. With each passing day, I gained more responsibility and ability to help out. By the end of the week, I was able to change and clean bedding, wash and clean babies, and make and feed babies their formula milk. I was grateful for the opportunity to make even a small difference.

One morning in the NBU was particularly horrific. The other IMA intern was on a safari, so I was the only intern in the NBU. As I walk in, I see a yellow baby on the procedure table. I look and notice it has no heart rate. A woman comes up to me and asks, "Nurse, is my baby dead?". I immediately tell her I am not a nurse, just a student, and ask a doctor to come over. I go into the next room to help with the morning cleanings and I hear a sound I will never forget. The woman cries so hard she screams, her loss beaming through the entire unit. The mother was told her baby was gone. Her baby was alone when I arrived, a dead human being left with no one. The poor mother walked in and saw her child in such a state. I swore to myself that I would never let that happen. I would never leave anyone--alive, sick, or dead--alone. It sounds simple, but this moment will stay with me for the rest of my life.

One day, after my morning shift, the amazing IMA staff helped me organize all of my donations. They took time out of their busy schedules to help me, giving me suggestions but ultimately giving me the final say. Their eyes widened when they saw the extent of my donations. I undid the vacuum packaging, causing the stuffed animals to expand and multiply in size. We organized the toys into several bags for several different areas: a big bag of lovies and small stuffed animals for the NBU, two

huge duffle bags of stuffed animals for pediatric patients, a suitcase of small toys for a local orphanage, a big box of school supplies for a local school, and a big bag of fidget toys and coloring books for the CGTRH's mental health unit.

After previously getting permission from the hospital staff, on Friday I brought dozens of toys with me to give to mothers in the NBU. I walked around the unit while the mothers were there breastfeeding their babies. I brought the bag to each mother, allowing them to choose toys for their newborns and other children they had. Some hospital faculty took some for their kids, too. Giving away these toys brought me an indescribable feeling of joy. I am grateful for the opportunity to make even a minute impact on their lives.

After the debrief, the IMA staff were kind enough to bring another duffle bag of my toys to give out. A mentor showed me to various pediatric units, where we were able to give patients toys. Seeing the smiles on their faces made my world. Each toy I gave out further reinforced why I want to go into medicine: I want to make a positive impact on others lives, especially when they need it most.

Also on that Friday, we listened to a lecture about diseases in Kenya. Dr. Shazim taught us about the most prevalent diseases in Kenya, such as the abundance and causation of each. His ability to teach us such a heavy topic with great patience was admirable and I was intrigued to learn more. I was surprised to learn that accidents account for the majority of outpatient deaths. Although not unreasonable--the streets of Kenya are chaotic and covered in unsafe tuk-tuks and vehicles--I had always assumed that diseases like malaria or HIV would take more lives. His teachings helped me be better prepared for my later shifts, specifically in the emergency department.

The following week, I was in the OB-GYN department. On Monday, I saw my very first birth. I saw two c-sections and one natural birth. Although the processes were very bloody and painful, it was beautiful to see new life come into this world. Every mother inspired me. They gave birth with little to no pain medicine. They rarely complained, cried, or screamed. They fought the pain head-on, maintaining a tough demeanor. This is very unlike the United States, where patients beg for pain medication and persist to complain about the most minute issues.

After my first shift in OB, I had an afternoon shift in the Accident and Emergency Department. Before my shift, other interns helped me pass out eighty more stuffed animals. We went to various areas of the hospital, giving toys to pediatric patients, children waiting around the hospital with their families, hospital faculty for their own kids, and more neonatal patients. I was overjoyed that the donations made it to where they will be greatly appreciated. I loved that I could share this joy with my fellow interns.

During my afternoon shift, I was mainly in the pediatric unit of A&E. This shift was the most life changing part of my entire internship. This one patient had severe burns. She was only four years old. I helped the doctor change her dressing, performing simple tasks like getting her saline and opening sterile gauze. The doctor treated this little girl with such care and compassion, comforting her through this scary and painful experience. I had given the child a toy from my toy drive earlier in the day--a stuffed gray elephant. When the child cried, the mother gave her the elephant and she would relax. This experience taught me that my actions are capable of having a positive impact, and I am capable of helping other people, regardless of my age or present status.

The following day, we were given a lecture on the history of pre and post colonial Kenya. I learned of the corruption embedded into the government, and this helped my later understanding. That night was the night of the first protests. The Kenyan people were protesting an inhumane bill proposed by a corrupt government. I also happened to have a night shift in A&E that very night. The lecture helped me understand the history and present state of the Kenyan government, allowing me to better comprehend the situation and why patients were coming into A&E with bullet wounds from the very police that were meant to protect them. I was overwhelmed with inexplicable rage and disappointment at the entire situation.

That night, I started off in the pediatric ward and luckily, no pediatric patient was wounded from the protests. I learned more about various conditions the patients had. The nurses and older interns explained every condition to me with such patience and detail that I truly understood it. After a few hours, I went over to the adult emergency room. I saw patients covered in bandages, from their head to their chests and every limb. Apparently, this was the tail-end of the protest's aftermath. Apparently, many more people had been injured, and a few dead. One particular patient stood out. He was my age, 16 or 17 years old, with a bandage wrapped around his hand. From the back, he looked normal, minus the bandage. He was so tough that no one would have guessed that he was just shot in the hand. No one would have guessed he had a bullet in his hand and little pain medication, but yet sitting upright as if nothing had happened. The only thing that gave it away were his eyes. Looking into his eyes revealed the inescapable and unhidable fear of an innocent young boy. I knew I couldn't leave his side. I knew there wasn't much that I could help with, but I was determined to help however I could. I tried to talk to him to ease his nerves. He told me that he was just outside his house when protesters ran by, chased by police. He was an innocent bystander. He was an innocent child shot by his own police. I was horrified and I will never forget the look in his eyes. I walked with him down to surgery, wishing him good luck as he was brought to the operating room.

When I returned to the emergency room, Dr. Shazim was there. He told me how the protests were far worse in Nairobi. He told me how a young female doctor was trying to save the life of a wounded

protester when she was shot in the back by the police. She died on the spot. He explained how cruel the proposed bill and taxation were and how corrupt the government is. The whole situation sickened me and filled me with such anger and melancholy unlike anything before. My shifts in A&E revealed my passion for emergency medicine. It is the department that best aligns with my philosophies: I seek to help others when they need it most. I seek to bring compassion, empathy, and comfort to others during their darkest moments. I want to maximize my impact. After seeing the knowledgeable and caring doctors, I seek to emulate their abilities, grit, and resourcefulness. I aspire to become just like them.

Every single day at the hospital was filled with endless learning, and my last few shifts were no exception. I saw more c-sections, with doctors eager to teach me and myself eager to learn. For instance, I learned why some mothers have to have c-sections and how c-sections are conducted. The doctors worked swiftly but yet carefully. One particular doctor was incredibly fast; just four minutes after the first cut, he delivered a healthy baby boy. Within a half hour, the mother was all stitched up and the baby sent to the NBU. Downstairs, I also saw many more natural births. Every mother's strength is amazing. They would deliver babies, get stitches, and even episiotomies with little to no pain medication. I remember one mother was getting stitched up after delivering her child, and I went to hold her hand. The mother and doctor both laughed at me. Kenyan culture is very different from American. Kenyan people are much tougher and stronger, unwilling to show any kind of weakness. Their strength through difficult and painful situations is nothing short of inspiring. I had the opportunity to listen to twins' fetal heartbeat, a beautiful experience that is likely once in a lifetime. I heard the first cries of several babies, seeing the mother's joy as they held their child for the first time. The culture is quite different from the United States. There, if a mother would cry or scream during labor they would call her "uncooperative". Mothers would hold their own legs open as they delivered in a pool of their own blood. In the United States, it is the opposite: the situation is far more sanitary, mothers hold their families hands and are dosed with pain killers. Although labor is extremely painful, mothers in Kenya have an insane pain tolerance and unmatched strength, delivering their children with insufficient pain medication and little support. Words cannot express their strength; I hope to emulate even a mere fraction of their fortitude and bravery.

Although I was only in Mombasa for two weeks, my internship was nothing less than life changing. The learning was indefinite and endless; I learned a plethora about various medical conditions and techniques, as well as life skills and who I am as a person. Each patient taught me something new. The entire experience not only increased my maturity, but also my compassion and gratitude. It cemented my desire to pursue a career in healthcare, sparking my interest in neonatology and pediatrics, but especially emergency medicine. I always thought there was no way I could be a doctor. I thought I did not have the intelligence nor capacity to make it. Seeing the interns in college and medical school made me realize that I am not too different from them. I realized that I am capable of following my passions,

no matter how difficult the road. I am infinitely grateful for this life changing experience and hope to complete another medical internship abroad in the future. I cannot speak highly enough of everything it taught me and how much I have grown. I hope to continue my journey carrying everything this internship has taught me; I aspire to emulate the strength and bravery of the Kenyan people and the compassion and resourcefulness of the hospital faculty, driven by the purpose of helping others when they need it most.

Asante sana, Mombasa.

REFERENCES

1. Kagwanja, M. (Presenter). (2024, June 25). The History of Pre and Post-Colonial Kenya. Speech presented at International Medical Aid Residence, Mombasa, Kenya.
2. Kagwanja, M., & Njeru, C. (Presenters). (2024, June 16). Healthcare Internship Orientation. Lecture presented at International Medical Aid Residence, Mombasa, Kenya.
3. Shazim (Presenter). (2024, June 21). Disease Burden in Kenya. Speech presented at Coast General Teaching and Referral Hospital, Mombasa, Kenya.

INTERNATIONAL MEDICAL AID
Reimagining Healthcare

GET IN TOUCH

Schedule a Zoom Call

Online Scheduling

EMAIL

admissions@medicalaid.org

ADRESS

1629 K Street NW Suite 300

Washington, DC 20006